

MASSACHUSETTS PLOUGHMAN

LIBRARY.
RECEIVED
MAR 11 1901
U. S. Department of Agriculture.

NEW ENGLAND

AGRICULTURE

JOURNAL OF

VOL. LX. - NO. 24

BOSTON, MASS., SATURDAY, MARCH 9 1901

WHOLE NO. 3086

MASSACHUSETTS PLOUGHMAN
NEW ENGLAND JOURNAL OF AGRICULTURE
Official Organ of the N. E. Agricultural Society.

MASSACHUSETTS PLOUGHMAN PUB. CO.,
Publishers and Proprietors.
ISSUED WEEKLY AT
NO. 3 STATE STREET,
Boston, Mass.

TERMS:
\$2.00 per annum, in advance. \$3.50 if not paid in advance. Postage free. Single copies 5 cents.
No paper discontinued, except at the option of the proprietor, until all arrearages are paid.
All persons sending contributions to THE PLOUGHMAN for use in its columns must sign their name, not necessarily for publication, but as a guarantee of good faith, otherwise they will be considered to the waste basket. All matter intended for publication should be written on note size paper, with ink, and upon but one side.
Correspondence from particular farmers, giving the results of their experience, is solicited. Letters should be signed with the writer's real name, in full, which will be printed or not, as the writer may wish.
THE PLOUGHMAN offers great advantages to advertisers. Its circulation is large and among the most active and intelligent portion of the community.
Entered as second-class mail matter.

Agricultural.

The Onion Crop.

Notwithstanding the fact that the strong flavor and odor of the onion is objectionable to many people, probably no vegetable, excepting the potato, is more popular or more generally used than the onion, and we doubt if there is any more wholesome or nutritious. Few cooks would think of making chowder, soup or stew without the onion, although they may vary its proportion from the amount that overcomes all other flavors to the faint suspicion of it that may arise from rubbing the sides of the kettle or dish in which it is served with a piece of the raw vegetable.

Not many years ago this crop was considered one of the most profitable that the farmer could grow, if he would manure his field liberally, and give sufficient care to the crop to prevent weeds from checking its growth, but certain localities had almost a monopoly of it. The well-tilled farms of Essex County, the banks of the Connecticut River from Wethersfield, Ct., to the Vermont line, or above, and the banks of Providence River were almost alone in growing this crop.

Then it was learned that they could be grown upon any well-drained land that was sufficiently well fertilized and well cultivated, from a sandy loam to a black muck, though a heavy clay was most unfavorable, because it was often so compact below the point where the plow penetrated that the fibrous roots of the onion would not go down deep enough. Upon this knowledge many other sections were given up to growing onions, especially some parts of New Jersey, some counties in New York, Michigan and Ohio.

This had a tendency to overstock the market, and reduce the price of the product, which was assisted by a lessening of the export demand. Considerable many of the Bermuda, Spanish and Egyptian onions are imported here, but they do not much decrease the demand for native onions, as they come when the last year's crop of natives are nearly exhausted or are not at their best, and fill the gap between our native crops. But they, with an increased production in European countries, have cut down our export trade.

The usual method of growing this crop has been to prepare the ground as early in the spring as it could be made into a fine seed bed, by plowing, frequent harrowing and a raking not only to remove stones, but to make the surface fine and mellow, and then with seed drill put in from four to six pounds of seed to the acre. Well-rotted stable manure was plowed in usually, and liberal quantities, and after a field had been in onions once it was given to the same crop year after year, each time being well manured, until the appearance of the onion maggot or some fungus disease gave warning that it was time for a change. But we have seen good crops grown upon green swart, turned over in the spring, given a coat of manure on the surface, and well worked to make a seed bed. If the swart was well mixed with clover when turned down, all the better for the onion crop.

When it was found that commercial fertilizers could be used instead of stable manures, the standard articles were first used at a rate of a half ton to a ton per acre. The larger amount cost less than the usual application of manure, and seemed to produce as good crops, but was not expected to add as much to the strength of the soil for future crops, and until science had demonstrated that nitrate of soda and potash were needed, and that phosphoric acid was taken by the onion bulb did the growers begin to feel confident that they could grow onions year after year successfully upon the same soil by the use of commercial fertilizers prepared expressly for this crop.

It is a usual rule to sow onions in drills twelve to fourteen inches apart, but in some places other crops were grown with them. Thus, on Rhode Island there were alternate rows of onions and carrots. Near Boston two rows of early celery such as they blame between boards, and from five to six rows between two rows of the late celery that was to be banked. The onions are ripe and used in the way before the celery is much more than half grown. Lettuce seed is sometimes sown with onion seed to mark the rows, that they may be hoed before the onion seed is in sight, and often a fair crop of lettuce is thus grown, or a lot of plants to be set out here after the onions have come up, and perhaps other crops are used in other places to help repay the expense of caring for the onion crop.

But what is known as the new method of



A FAITHFUL DGG.

growing onions is responsible for lessening the cost of producing the crop to a small extent. The onions are started under glass, and the field having been well prepared it is run over with a marker, making furrows about an inch deep. Then the young plants, three inches high or more, are taken by one boy, who distributes them along the row two to four inches apart, while another as quickly presses the earth firmly around the roots.

Among the advantages of this plan are the fact that less seed is required for an acre; the ground being perfectly clean there are no weeds at the time of setting, and the two first seedlings by the old method are saved, and two boys can set more rows in a day than five boys could weed by the old method; the plants get an earlier start under glass, and can be set about as early as seed used to be sown, and thus the crop ripens earlier; there is less trouble from the onion fly or maggot, and plants being at uniform distances apart are more uniform in size. Thus it is claimed that there is as much profit in growing them now at 50 cents a bushel as there used to be at \$1, and when a season like this winter comes that they sell for \$3 to \$4.50 a barrel, there is a good profit.

We have alluded to the nutritive quality of the onion, and we may call to mind that the hard-working French peasant, lacking meat, will make his dinner or his luncheon of black bread, adding thereto a raw onion, not merely as a relish, but as the more hearty part of the food, while for the same purpose the Italian, Spanish and Mexican substitute their stronger native garlic, and the Welsh the leek.

The onion has long been known as a medicinal plant. In the old days, when in many places one must go many miles to find a physician, perhaps not qualified for his duties when found, there were usually old women thought "just as good as a doctor," and who, at least, by simple remedies and good nursing could check the progress of ordinary diseases until the doctor could reach the patient with his saddle bags or little box of drugs, when the case was in God's hands, and if the drugs were rightly used and not too powerful, there might be a recovery.

Onions stewed to a pulp, and the juice pressed out and sweetened to a syrup with loaf sugar, was a remedy for coughs, colds and bronchial troubles, and may have prevented many cases from resulting in membranous croup or diphtheria. Raw onions, or the juice expressed from them, were the standard worm medicine for children,

whether they had the stomach worms liable to cause convulsions, or the annoying but not dangerous pin worms. Raw onions again eaten freely by older people not only relieved kidney diseases, but were thought to dissolve gravel or stone in the bladder. A slice of raw onion or a poultice of roasted onion was used upon ulcers and sores caused by a wound from rusty nail or tool, or by the bite of an animal, and it, as an antiseptic, prevented blood poisoning, and perhaps drew out the poison already in there.

If insomnia and nervous debility had been known to the old ladies of a century ago they could have found in the onion a remedy for them. They certainly knew that a handful of onion skins in the hen's nest would prevent her forsaking her nest because of lice, and that the half of a raw onion rubbed on the neck of calf or colt kept lice from becoming too troublesome. Then no one expected young animals or school children to be entirely free from these pests.

The sailor on a long voyage or the soldier in camp, restricted to a diet of salt meats with few vegetables and less fruit, has often proved the value of the onion in curing or preventing scurvy, for many years the pest of whalers and voyagers around the world. Therefore we wish success to the growers of the fragrant bulb, and while we cannot expect that they will obtain as high prices for them another season as they bring now, we certainly hope they will be able to grow them and be well repaid for their labor.

Proper Temperatures for Food Products.

The Department of Agriculture, in Farmer's Bulletin No. 125, treats upon the "Protection of Food Products from Injurious Temperatures," and while the Bulletin is sent free to all who apply for it, we propose to condense for the benefit of our readers such as we think will help them in this matter, whether they are farmers, dealers or shippers.

The first part of the book is devoted to the protection during transportation of perishable freight, in which they include fruit and vegetables, milk, dairy products, fresh meats, poultry, game, fish, oysters, clams, canned fruit and vegetables, and most bottled goods. These need to be protected from frost or excessive cold, excessive heat, and by ventilation from such gases as are generated by some of these classes.

While the degree of cold or heat to which they may be subjected varies greatly, and may also be influenced by condition when

shipped, and whether kept in motion on the route, and the promptness of unloading, there are precautions against cold in the way of packing in paper, straw or sawdust, boxing or barreling with paper lining, shipping in paper-lined cars, refrigerator cars, and cars heated by steam, stoves or salamanders. Shippers say that the lined cars give sufficient protection in spring and autumn, while specially built cars may be needed in extremely cold weather.

In ordinary freight cars, perishable goods can be safely shipped when temperature outside is 20°, and in refrigerator cars at 10°, or from zero to 10° if the car is first heated and at the end of the journey taken at once into a warm place without carrying any great distance. If an ordinary car is lined with thick paper tacked to the wall, and an inner board keeps produce a few inches away from the wall, the temperature may average at least twelve degrees higher than outside. Cars sheathed inside with tongue and grooved boards are thought best for shipping potatoes, as they can be heated by ordinary stove when outside temperature is 20° below, if a man is in charge to keep up the fires.

The best refrigerator cars will carry such goods safely at 20° below zero, if they are not subject to it for more than three or four days, but the ordinary refrigerator cars are not considered safe for very perishable goods at much below zero. In winter they are used without ice in sending goods from the Pacific coast, the cars being lined and with padded doors, have the hatches closed in cold climates, and ventilators opened in passing through warmer climates. A new and much used refrigerator car is described as double lined, with four galvanized iron cylinders at each end inside, from floor nearly to the top, and these are to be filled with ice, broken in lumps as large as the fist, and salt tamped down hard. They are said to cross the continent without re-loading, and are used in winter the same as in summer.

It is a mistake to build fires in round-houses where cars of produce are stored, as a uniform temperature just above freezing is most favorable. Cars for grain need arrangements which will ventilate and at the same time protect contents from rain, sparks and cinders, and should be adopted by all roads. An experiment with five cars of oranges, making a seven days trip from California, was made in 1895. Two refrigerator cars had ventilators closed from 4 A. M. to 8 P. M., and the others had them open through the trip. There was from 8° lower temperature to 19° higher outside than inside, and it

varied less in refrigerator cars than in fruit cars. Those with ventilators closed during the day arrived with fruit in better condition than those with open ventilators.

From the Pacific to Mississippi Valley, or to Atlantic Coast, the cars pass through so many different climates that the cars may be materially above the outside temperature at one time, and a few hours later much below.

Products sent loose in a car are often packed in straw on all sides, particular attention being given to packing around doors, and to have the car full. Manure is also used largely, covering the bottom of the car, and sometimes placed over the goods. When a north wind is blowing across the prairie, cars of perishable goods are sometimes covered with canvas on the north side. If produce has been at a low temperature for some time before it is put into the car, it is in poor condition to withstand low temperature. Potatoes are said to endure more cold when in motion than when standing still, but goods packed in a refrigerator car at 50° to 60°, and closed, may endure 10° to 20° below zero for four or five days without injury.

Fresh beef should be shipped in cars at a temperature of 36°, although under favorable conditions it may go all right at 40°. It should be chilled to this point in cold room before being put on the cars. In winter the car should be kept up to 36° by stoves or oil lamps. If the refrigerator cars are not used, the meat should be wrapped in burlap, and carcasses hung so as not to touch one another. Meat thoroughly cooled may be kept a week in an ordinary box car if temperature outside is 50° or below, and weather is dry, but changes of 10° to 20° in temperature should be avoided, as they are injurious. Poultry if shipped at 50° or higher should be packed in ice or burlap, but under 50° in dry weather needs no extra precautions. Live poultry in coops are often much overcrowded, resulting in death or deterioration.

Milk should be reduced to 40°, but should never be frozen. Eggs packed in cases, with the pasteboard division and layer of oats or chaff, should not have a lower temperature than 28°, but will usually come through all right where it is 5° to 10° below zero if in refrigerator cars, or at 10° above in common ones if not more than 48 hours on the road.

A firm of wholesale dealers in butter and cheese say that butter is not affected by extreme cold, and in cold storage it is carried from zero to 10° above, but from zero to 32° will keep it very safely. In shipping it may go from zero to 10° above, but should not be out of cold storage a long time before being

used. Extreme heat and cold are injurious to cheese. It freezes slowly, takes a long time to thaw out, and becomes dry and crumbly, never again being firm and sticking together. At 10° above zero it freezes if on the road one or two days. Skimmilk cheese freezes quicker than full cream cheese. If allowed to reach above 75° or 80° it shows bad effects, which causes it to swell and ferment, and in cases of extreme weather either way shipments are withheld for a few days.

Fish are shipped by express or freight. By express they are sent in barrels packed in ice. By freight in cases holding 600 pounds each, or boxes on wheels of 1000 pounds each. In carload lots, in bins built in the cars and thoroughly iced. The ice should equal half the fish in weight. Under favorable conditions, they are sound and marketable 30 days after being caught and packed in ice. The entrails should be removed before shipping, as they are the parts that most readily decay. They should be used as soon as thawed, as they decay rapidly.

Shucked oysters, shipped in their own liquor, will not spoil if frozen in transportation. Thick or fat clams and oysters do not freeze as readily as lean ones, as they contain less water, and oysters do not freeze as readily as clams. When frozen in the shell they should be allowed to thaw out gradually in a cool place. They freeze more readily in fair weather with a stiff wind than in a snow storm, and should be shipped in tight barrels, lined with paper.

Fruits are often in more danger from decomposition by heating than from cold, as they generate heat. The same care that keeps out cold helps to keep in the heat, and a carload of fruit nearly ripe, closed up tight in a refrigerator car without ice, at a temperature above 50°, may generate heat enough in twenty-four hours to spoil it. A uniform temperature of 40° to 50° will keep it for twenty or thirty days, if carefully handled. Strawberries have been sent from Florida to Chicago, and put in cold-storage rooms have kept four weeks after being picked, in perfect condition.

Fruit for immediate loading should be gathered in the coolest hour of the day, or if subjected to a high temperature before being loaded, should be cooled immediately. The temperatures should be such as to cool it in four or five hours, and Southern shippers declare it to be unsafe to load fruit, particularly peaches and cantaloupes, directly from the field. One Southern railroad has announced an intention to erect cooling rooms to put such fruit in proper condition before loading it on the cars.

Tropical fruit in ordinary freight cars cannot be safely shipped when temperature is below 30°, unless not likely to be over twelve hours on the road, and then it should be carefully packed in straw or hay. More hardy Northern fruit can be shipped at 25°, but need to have similar protection, and long exposure to 20° is considered dangerous to their safety. Foods in cans or glass should not be sent far when temperature is below freezing point.

Oranges from Florida to points as far north as Minnesota are started in ventilator cars, and at Nashville are changed to refrigerator cars, the ventilators being left open if temperature is above freezing, but at St. Louis these are closed and cars made air tight. Oranges and lemons are packed in crates, and each layer of crates rests on and is covered by straw, the car full and bulkheaded back from the door. Oranges loaded in ventilated or common cars should be transferred to refrigerator cars when temperature reaches 10° above zero. With falling temperature all the ventilators should be closed at 20° above, and with rising temperature they should be opened at 28° above. For lemons the lowest temperature for opening and closing ventilators should be 35°, and for bananas 45°, and some shippers say 40°.

With a carload of bananas a man usually is sent to open and close ventilators. They should be put in a paper bag, and then in heavy canvas bag, then packed in salt hay. At 45° they chill, turn black and fail to ripen. Some shippers heat refrigerator cars to about 90° by oil stoves, then load the fruit quickly after stoves are out, then put them in again and heat to 85° to 90°, then take stoves out again and close the car tight, when they think it safe for forty-eight to sixty hours, even if temperature goes to zero.

Apples, pears and quinces in barrels have each layer of barrels covered with or resting on straw. Potatoes are packed in straw, bulkheaded back from door, the centre of the car empty, and car filled as high as double lining goes. If temperature is at 20° or lower, barrels should be lined with thick paper, and at extremely low temperature they should be covered with the same.

Early vegetables from the South to Northern markets forty-eight hours or more away should be in open-work baskets, slatted boxes or barrels with holes cut in them to allow circulation of air. As a rule shippers will not send them when temperature is at 20° or lower, and in no case at 32° if it is raining or snowing.

In a future article we will give what the bulletin says about cold storage temperatures.

Not many farmers know that a branch from a tomato plant can be rooted in a box of sand kept moist, just as easily as the florist roots slips from his geraniums and other soft wood plants, yet such is the case. They root quickly and make good strong plants too. Those who train their tomatoes to grow upright by tying to stakes, have to cut away many side branches which they can utilize in this way, and they will often come into bearing as quickly as the main stalk. Also those who buy plants can make a half dozen from one which may be an advantage if one pays a high price for some new or choice variety.

Agricultural.

Dairy Notes.

Probably next to the use of the separator there is no method of butter making which requires so little labor in caring for the milk and cream and the utensils as the deep setting cans put in water at a temperature from 32° to 50°. There were those who advocated the lower temperature, or that produced by placing them in ice water, as bringing the cream to the surface in the shortest time, while others were as certain that this extreme cooling gave a tallowy texture to the butter, and did not develop the better flavor of the butter that came from a slower raising of the cream at the temperature of good spring or well water, about 48° to 50°, cooled a little lower with ice if it were at hand when the cans of hot milk were first put in. We think the last were right, so far as the flavor and grain of the butter were concerned. And we doubt if even this would give as good flavor as a slower raising of the cream, such as could be brought about when the milk was put in shallow pans 1½ to three inches deep, set where the temperature was nearly uniform at 50° to 60°, skimmed after twenty-four to thirty-six hours standing, ripened from twelve to fifteen hours before churning, and churned at 56° to 58° in hot weather and 48° to 52° in cold weather. How much effect bacteria had on the product we cannot say, but we never ate finer-flavored butter than was made in this way, and if dairymen could control conditions to be sure of the purity of the milk, and that the temperatures would be as above given, there would not be any better prices paid for creamery butter than could be obtained for such dairy butter. And we think today there is some dairy butter made in this way that is classed as "gilt edged," and sold at prices far above, if not double, the highest quotations for creamery.

Those who have winter rye growing to be used as an early pasture for the cows and young cattle will do well to remember that it is a laxative food, particularly when it is making a rapid growth, and the cattle should not be turned on it without having a good feed of hay before going out. They should not be kept on it too long at one time, especially at first, and then at night again as much hay as they will eat clean. A neglect of these conditions may cause scouring and a loss instead of an increase in production of milk or of growth on young animals. The succulent feed is all right when rightly used, but too sudden a change from dry hay to green rye should be avoided, or even to green pastures of any sort.

It is customary for many writers on dairy matters and speakers at dairy meetings to express regret that we cannot gain a larger export trade to England in our dairy products, and usually to ascribe the cause of it to the fact that our exporters do not send better qualities, and thus the reputation of United States goods suffers there. As a rule, our exporters know their own business better than those who are not in the export trade. There is scarcely a season of year when there is not a demand for the best grades of butter here greater than the supply, and many times within the years that we have watched our markets, when the best grades of butter have been shipped to England, the shippers have found it more profitable to send it back here and sell it in New York or Boston than to sell it there. They send what that market calls for, and they know that if they can buy renovated or imitation or lard-patched butter at about twelve cents a pound here, they can find customers there at prices which will yield a profit, while at the highest prices paid there, they could not afford to send over our extra creamery that sells at 22 to 25 cents a pound in our market.

English buyers are searching our markets today, not for our best grades of cheese, but for the late-made skimmed cheese, and they cannot find enough of it. When several thousand boxes of cheese were so damaged by fire a few weeks ago in Montreal, that it was sold at about three cents a pound it was taken for export trade very quickly. At that price it could scarcely have been sold at a profit in the poorest quarters of any city in the United States, but Liverpool, London and Manchester can find customers for it.

We wish there were no butter or cheese made in this country that graded lower than extra, as it would mean a larger profit to the dairymen and better food for the consumers, but as long as low-grade goods are made we ought to be thankful that our exporters can find a market abroad for it as a surplus product that there is but little demand for in the home market, and we prefer that it should be so than that our dairymen should do as they say is done in Denmark and Holland, sell all the good butter for export and eat oleomargarine themselves. This is given as an explanation of the reason that those countries buy so much oleo oil in the United States and export so much butter, and those may believe it who will, but there are others who think that much of the oleo oil goes to the creameries, and helps to increase their butter exports.

A writer in the Farmer's Guide relates his experience with the hand separator. When he was setting his milk, skimming and churning the cream he found by a two months record that he made a pound of butter from a little over twenty-four pounds of milk. For the same length of time when using the separator he made a pound of butter from eighteen pounds of milk, which was a gain of about thirty per cent. This increase was not kept up through the summer, but he had averaged a gain of twenty per cent. For fifteen months in the amount of butter made from the same weight of milk. He also learned another thing from his daily record of weight of milk and amount of butter made. He did not feed any grain during the summer while cows were on grass last year, and it required from twenty-one to twenty-five pounds of milk to make a pound of butter, but he began to feed grain in October, and as he gradually approached full rations, the amount of butter increased, until in January he could make a pound of butter from 17.8 pounds of milk. The churn test from June 1 to Sept. 30 showed 4.3 pounds of butter made to each one hundred pounds of milk, and from Oct. 1 to Jan. 31,

Cows Made To Breed

By injecting with Hood Farm Breeding Powder. Over 75 per cent. of cows treated with it for failure to breed have since bred.

After Abortion all cows should be treated. It thoroughly disinfects, kills germs and puts organs in normal condition. \$1 and \$2.50. Dollar size, mail \$1.15, large, four times more, express, \$2.75.

Wood Farm Milk Fever Cure saves 90 per cent. of cows attacked by this disease. \$2.50. By express, \$2.75.

Extra good Jersey bull calves and Berkshire swine generally for sale. Correspondence solicited. Mention this paper. Address: C. I. HOOD & CO., Lowell, Mass.



SHORTHORN BULL.

3.1 pounds, a gain of four-fifths of a pound to each one hundred pounds of milk. While some part of this gain may have been due to the cows being farther advanced in lactation, he believes, as we do, that some part of it was due to the better feeding.

Grass Culture.

No more important crop is raised on our Eastern farms than the grass crop. The practical experience of those who have been successful in grass growing is valuable to every one who is facing the problem today of larger farm crops. We know of no one who has given so much attention to grass culture as our correspondent, George M. Clark of Higganum, Ct. What he has to say is the result of practical experience and years of observation. His success in raising large hay crops under unfavorable circumstances has been quite remarkable.

The condition of his field when he commenced to reclaim it was below the average. The land was so poor, or dormant, that little or no value had been obtained from it in fifty years. A portion of it was swamp; the northeast corner of the sixteen-acre field was 125 feet lower than the northwest corner; the surface was half covered with rocks which had been removed before the cultivation of grass began. At least a thousand tons of boulders to each acre were drawn off and thrown into seven or nine foot ditches, sixteen rods of which held one thousand tons. It cost \$100 at the rate of ten cents per ton to bury one thousand tons eighteen inches deep.

Mr. Clark says if he were to do the work over again he would not bury the rocks, but would draw them into one large heap, for the reason that the ditch undermined the land too much, and cut off the sub-soil water, which is very essential in the cultivation of any crop.

He found, in his experience, that with intensive cultivation and correct grading, there is seldom any need of any except surface drainage. The surface soil of his field when finished was clay, hard pan and gravel, and loam and gravel. All of the decomposed vegetable matter, when the grade was finished, was swept off so that the surface was almost entirely made of hard pan and gravel. A portion of the field was too moist. As the land raised it became somewhat dryer, until, at the northwest corner, it was extremely dry.

In the sections where he had no ditches the grass has been much heavier. In a section of seven-eighths of an acre, where there was no drainage, he has taken off eighty-seven tons of well-cured hay in eleven years, at the rate of slightly more than nine tons to the acre each year. The second crop on this section has usually been about three tons per annum, so that the first crop would average about six tons.

As his best land was too moist for a general crop, he was confronted with the question how to renew the crop of grass without loss. The grass is cut July 1, and in two months the land must be reseeded.

He found that to reseed in a single season would always be a little more expensive. The surface was elevated, twisted and turned at least twenty-five times by farm machinery in two months. The soil was quickly killed, but some of it at the time of seedling still remained upon the surface and had to be removed, when, with a little more time, it would all have been plowed off. For that reason Mr. Clark advises on all land where general crops can be grown to rest one year, cultivate more thoroughly and kill out all vegetation.

The most approved way, according to his experience, to do this, is as follows: Commence July 1, stir and sunburn for two months, then sow rye and wheat. Then again get July and August for sunburning, killing, drying and renewing the soil. If the land is flat it might rest until spring and sow oats. The worst land, with two seasons of this intensive cultivation, will go on for years and do good work.

What we call "worm-out" farms are simply dormant. Intensive cultivation with a little time and fertilizer will make them produce the largest crops of grass. Notice the truck gardener. He keeps his land in the air from spring to fall, year after year, continually increasing his product. He cultivates and feeds, keeps on cultivating, feeding and selling. He actually gets more cash from a three-acre farm than the average farmer from 180 acres.

In Mr. Clark's little hay circular which he is distributing free by mail to our readers who write him for it, he admits that J. H. Hale of South Glastonbury, Ct., was the first man of his acquaintance to find intensive cultivation, and he found it by trying to kill with grass. He killed the grass and made a crop of corn in a drought. He said intensive cultivation, bone, muriate of potash and nitrate of soda would make a large grass crop. That is where Mr. Clark started, he claiming that intensive cultivation is more than half the battle. To use his language: "The heavens possess life and light. Stir the earth and you will take the vitality in it. The stir kills foul germs. Every time you stir the soil more weed seeds are sprouted and then killed, and thus the land is cleaned."

Dairying for the Creamery.

Fancy herds of cows are not alone intended for the farmer who can make a specialty of supplying city customers with fine cream and milk, although sometimes the impression seems to prevail that this is all they are good for. Where customers are very particular about their cream and milk and are willing to pay good prices for them, fancy Alderney and Jersey cows seem all right, but for the farmer

who most depends upon the creameries for the sale of his milk it presents quite a different aspect. Creameries which pay for their milk without much reference to the butter fat in it will never encourage a farmer to make the most of his herd. It is always quantity and not quality that he aims for, and as a result the owner of fancy cows would be placed at a disadvantage. Very often where farmers co-operate to run a creamery the milk is bought on the wrong basis. No effort is made to distinguish between the milk which is rich in butter fats and that which is very deficient in them.

A commercial creamery run by expert business and scientific men never commits this error. The milk is all purchased on the basis of the butter fat contents, and there is encouragement given to all farmers to own better cows and to feed them better. This is the only fair method of dealing, and it is the only method which will stimulate more exact scientific dairying in any locality.

If milk is purchased by the creamery on this basis there is more money to be made in dairying than many find is the case today when they sell their products to the city milk dealer. The rich milk and cream from Jersey cows will in this way more than pay for the extra cost and feed of the animals. I have neighbors who receive good incomes from high-bred stock simply because there is a first-class creamery which buys the milk on an honest basis. The farmer who raises common, ordinary cows in this locality has long since found out that his work did not pay. There was a premium placed upon high-bred animals because of the higher profits they yielded. When the milk of the two came to the creamery, the ordinary cow's product suffered so in comparison that it discouraged the owner from any further work from that line. Probably no better lesson could be taught dairymen of any region than this. But then we would have to have honest creamery managers and men who understood their side of the question. C. S. WALTERS.

Butter Market.

Boston market was almost bare of extra fresh creamery on Monday morning, and Northern assorted sides sold readily on arrival at 25 cents, with some receivers wanting a half-cent more, with Western assorted spruce and large tubs Northern at 24 cents, and Western ash at 24 to 24½ cents. Northern firsts selling well at 25 cents and Western at 22 to 23 cents. Eastern ranges from 20 to 23 cents in small supply. Seconds go from 20 to 21 cents. Stock from cold storage in good demand 21 to 22 cents for extra and 19 to 20 cents for firsts. Extra dairy is 21 cents for Vermont and 20 cents for New York, with firsts at 18 to 19 cents and seconds at 17 to 18 cents. There is fair demand for boxes and prints, and extra northern creamery is 23½ cents, western 25 cents, extra dairy 22 to 23 cents, and common to good 19 to 21 cents. Renovated butter also in good demand at 17 to 18 cents for choice and fair to good at 12 to 15 cents. Imitations are selling better at 13½ cents for seconds, 14 cents for large tubs first, and 15 cents for small extra. Ladies in limited demand at 12 to 14 cents. Jobbers are holding best creamery at 26 to 27 cents for tubs and 28 cents for boxes and prints. Present indications are for higher prices another week.

The receipts of butter at Boston for the week aggregated 18,436 tubs and 15,617 boxes, a total weight of 708,027 pounds, including 31,300 pounds in transit for export, and, with the latter left out, the net total is 736,227 pounds, against 813,398 pounds the previous week and 550,833 pounds for the corresponding week last year. This shows a falling off from the week before, but a considerable increase as compared with last year.

The exports of butter from Boston for the week were 86,095 pounds, against none last year. From New York the exports amounted to 11,228 tubs, and from Montreal, by the way of Portland, 730 packages were sent off. The stock in the Quincy Market (Cold Storage Company) last week was reduced about 400 tubs. The Eastern Company reports a stock of 4500 tubs, against 904 tubs last year, and, with these added, the total stock is 31,455 tubs, against 15,066 tubs a year ago.

Vegetables in Boston Market.

There is but a limited supply of fresh-grown vegetables in the market here, as supplies from Southern points are light. Old carrots and beets are steady at 40 to 50 cents a box, new beets at \$1.50 a dozen boxes and best greens 60 to 70 cents a box. Parsnips 50 to 60 cents a bushel and flat turnips 30 to 40 cents, with white French scarce at \$2 to \$2.75 a bushel and yellow 80 to 90 cents. Native onions also scarce at \$3.25 to \$4 for choice to fancy lots. Spanish \$1.50 a crate and Bermuda \$2.75. Leeks, 40 to 50 cents a dozen and radishes 30 to 40 cents. Cucumbers more abundant, No. 1 at 40 to 45 cents per hundred and No. 2 at \$5 to \$8. Green peppers scarce at \$2 to \$2.50 a case. Hot-house tomatoes 40 to 50 cents a pound, and Southern \$3 to \$4 for six-basket cases. Rhubarb is lower at 5 to 8 cents a pound, and celery higher at \$7 to \$9 a box. Western Hubbard squash \$30 per ton, marrow and turban \$1.50 a barrel. Artichokes steady at \$1.50 a bushel.

Cabbages are \$1.12 to \$1.35 a barrel, cauliflowers \$3 to \$3.50 a case, and sprouts 22 cents a quart. Norfolk kale \$1.25 a barrel. Lettuce varies from \$1 to \$2 a box. Southern spinach is in small supply, and good Norfolk brings \$3 a barrel. Dandelions higher, at \$1.25 to \$1.50 a bushel. Endive \$1 to \$1.25 a dozen and parsley \$2 to \$2.50 a box. Good asparagus \$3.50 to \$4 a dozen

and culls \$1.50. String beans in small supply at \$4.50 to \$5 a crate. Mushrooms cheaper at 35 to 50 cents a pound.

Potatoes in full supply and only fair demand and a little weak at quotations. Houlton Green Mountains bring 65 cents, extra Aroostook 63 cents and fair to good 60 to 62 cents a bushel. Extra Hebrons 60 cents, good 58 cents and Dakota Red 50 to 53 cents. York State white 50 to 55 cents for long and 50 cents for round. Western white 50 to 55 cents for round and 50 cents for long. Sweetens in small demand and limited supply at \$1.50 to \$2 for Jersey double-head barrels.

Export Apple Trade.

The total apple shipments to European ports for the week ending Feb. 23, 1901, were 15,149 barrels, including 12,115 barrels to Liverpool, 2448 barrels to London, 431 barrels to Glasgow and 155 barrels various. The exports included 2663 barrels from Boston, 2324 barrels from New York, 7160 barrels from Portland, 2520 barrels from Halifax and 502 barrels from St. John. For the same week last year the apple shipments were 17,004 barrels. The total apple shipments since the opening of the season have been 1,236,018 barrels, same time last year 1,175,367 barrels. In detail the shipments have been 392,334 barrels from Boston, 238,016 barrels from New York, 193,221 barrels from Portland, 246,953 barrels from Montreal, 171,066 barrels from Halifax, 20,801 barrels from Annapolis and 5005 barrels from St. John, N. B.

Letter from Liverpool to Chester R. Lawrence, Faneuil Hall Market, dated Feb. 16, says that Maine Baldwin shows improvement in condition, some fully equal to our received this season. Canadian stock shows up well excepting Russets, which lack color and are somewhat spotted. Spies are scarce, but reports of larger quantities coming. They are in good demand. California Pippins are bringing better prices. Receipts at Liverpool from Aug. 12 to Feb. 9, 684,326 barrels, 60,384 boxes. To same date last year 530,106 barrels. Quotations: Boston and Maine Baldwin tight No. 1 \$3.12 to \$4.20, No. 2 and slack packed \$2.16 to \$3.54, Ben Davis \$3.36 to \$4.44 for No. 1, and \$2.88 to \$3.78 for No. 2, Canadian Baldwin \$3.60 to \$5.32 for No. 1, and \$3.12 to \$4.36 for No. 2, Russets \$3.42 to \$4.80 for No. 1 and \$2.88 to \$3.84 for No. 2, Ben Davis, Canada Red and Seeks No. 1 \$3.60 to \$5.04, No. 2 \$3.36 to \$4.20, California Pippins \$1.74 to \$1.92 a box.

New York Markets.

Southern vegetables generally are in light supply, with fair demand for prime lots, but many not first class. Native winter vegetables enough to keep about steady prices. Long Island potatoes in bulk \$1.50 to \$1.75 a barrel, Jersey prime \$1.25 to \$1.50, State and Western per 100 pounds \$1.25 to \$1.75, sacks \$1.40 to \$1.60, Bermuda prime \$4.50 to \$5, No. 2 \$3 to \$3.50, and Havana \$3 to \$4. Vineland sweets \$2 to \$2.50 a barrel, and other Jersey \$1.50 to \$2. Onions, Connecticut or Long Island per barrel, white \$3.50 to \$6, yellow \$2.50 to \$3.25, red \$2.50 to \$3, State and Western yellow, double head barrels \$2.50 to \$3, Orange County bags, white \$3 to \$5, yellow \$2.50 to \$3.25, red \$2.50 to \$3, Bermuda \$2.25 to \$2.50 a crate and Havana \$2.25. Old beets are 75 cents a barrel, New Bermuda 75 cents to \$1 a crate, Florida 65 to 85 cents a crate or \$4 to \$5 per 100 bunches, and New Orleans \$2.50 to \$3 per hundred. Old carrots 60 cents to \$1 a barrel, new Bermuda 75 cents to \$1 a crate, Southern \$2 to \$3 per 100 bunches. Parsnips old 75 cents to \$1 a barrel. Russia turnips 70 to 85 cents. Celery, Florida, in fair demand at \$2.50 to \$3.50 a case, most at top price and some fancy a little higher. Western large 50 to 75 cents a dozen, with small and medium from 15 to 40 cents.

Native cabbages \$12 to \$15 per ton. Florida mostly poor and dull at \$1.50 and \$2.50 a barrel crate. Florida cauliflower \$2 to \$3 a basket. California \$1.25 to \$2.50 a case, prime selling well, but much of it small and poor. Brussels sprouts 8 to 10 cents a quart. Norfolk kale in demand at \$1 a barrel. Florida egg plants \$1.50 to \$3 a box and tomatoes at \$1.50 to \$3 a carrier for Florida, \$1 to \$2 for Havana and 20 to 35 cents a pound for hot-house.

Other hot-house products, asparagus \$5 to \$6 a dozen, rhubarb 30 to 40 cents, radishes \$1.50 to \$3 per 100 bunches, cucumbers, prime to choice \$1.25 to \$1.50 a dozen and No. 2 75 cents to \$1. Lettuce choice 40 cents a dozen, and poor to fair 75 cents to \$1 a case of 4 to 5 dozen. Mushrooms 20 to 40 cents a pound. New Orleans green stuff in light supply, chicory at \$4 to \$6 a barrel, escarol \$4 to \$5, romaine the same, with Bermuda crates and Florida baskets \$1.25 to \$1.50 each. New Orleans lettuce \$2 to \$4 a barrel, half-barrel baskets Florida \$2 to \$3.50, and Charleston \$1 to \$2, with Carolina bushel baskets \$1 to \$1.25. Florida peppers \$1.25 to \$2.25 a carrier. Okra from Havana dull at \$1.50 to \$3 a carrier. Parsley weak at \$1.75 to \$2.25 per box for Bermuda, and \$3 to \$3.50 per 100 bunches of New Orleans. Spinach \$1.75 to \$2.50 for Norfolk and \$1.25 for Baltimore.

A fair supply of green peas from Florida at \$2 to \$3 a basket, and some fancy lots at \$2.50. California boxes dull at \$2 to \$2.50. String beans in light receipt and higher at \$2.50 to \$5 for Florida crates, but not many above \$4.50, and most sales \$3 to \$4. Hubbard squash \$1.25 to \$1.50 a barrel. Marrow \$1 to \$1.25. No new squash in.

Apples in liberal receipt, but good demand. Spitzenburg are \$3 to \$5 a barrel, Newtown Pippin \$1.25 to \$4, Ben Davis and Spy \$2.50 to \$3.50, Baldwin \$3 to \$3.50 for fancy, \$2.50 to \$3 for average prime, fancy Greenings \$2.75 to \$3.25, good to prime \$2.25 to \$2.50,

Cream Separators.

The dairy or farm users of cream separators may well profit by the experience and follow the example of the creamery or factory users of such machines on a large scale.

The differences between a superior and an inferior separator are just as relatively material to the farm user as to the factory user. The amount is not a couple of thousand dollars a year, of course, as it is with the factory user, but it is from \$25 to \$75, according to the quantity of milk, and that means just as much to the farm user. Moreover a De Laval machine is twice as well made and will last at least twice as long.

Every large and experienced creamery or factory concern in the country is now using De Laval machines and buying them exclusively. Nearly all these concerns have tried various "cheaper" makes of separators and many have cast aside thousands of dollars worth of them.

Such facts mean something to every user or intending buyer of a separator—big or little. The differences between small separators are just the same as between big ones.

The De Laval machines can alone employ the patent protected "Alpha" disc system of divided strata separation. They bring standard prices and are made accordingly. In consequence they are as superior to the best of other separators as such machines are to setting systems. The poorer makes of other separators are mere fakes.

A "20th Century" De Laval Catalogue will help to make these facts plain and may be had for the asking.

THE DE LAVAL SEPARATOR COMPANY,

Randolph & Canal Sts., CHICAGO, 103 & 105 Mission St., SAN FRANCISCO.

General Offices: 74 CORNHILL STREET, NEW YORK.

327 COMMERCIAL ST., MONTREAL, 248 McDermott Ave., WINNIPEG.

and cooking winter apples \$1.50 to \$2. Cranberries in good supply and light demand at \$8 to \$9.50 per barrel for Cape Cod choice and \$7 to \$7.50 for common to fair, Jersey prime \$6.50 to \$7, or \$1.50 to \$2.25 a crate. Grapes very dull. Catawba at 8 to 10 cents a basket, 75 cents to \$1.25 a case. Florida strawberries in light receipt, prime to fancy 30 to 45 cents a quart, poor to fair 15 to 25 cents.

Domestic and Foreign Fruit.

With the receipts of apples amounting to 6089 barrels, and but 2643 barrels exported, last week the supply is good, but as suburban markets are now calling for apples the demand is enough to maintain firm prices. For same week a year ago 1040 barrels were received and none exported. King sell now at \$2.50 to \$3 a barrel, Spy \$2 to \$3, fancy Baldwin \$2.75 to \$3, and fresh-packed No. 1 Baldwin or Greening \$2.25 to \$2.75, and No. 2 \$1.25 to \$1.75, Talman Sweet \$1.50 to \$2.50 and mixed varieties \$1.50 to \$2. Cranberries selling slowly; choice dull \$7.50 to \$8, medium at \$6 to \$7, boxes \$2 to \$2.50. Florida strawberries in light supply and small demand at 30 to 40 cents a quart.

Florida oranges in fair supply at \$3.25 to \$3.50 for bright, \$3 to \$3.25 for Russet, large coarse \$2.50 to \$2.75. Grape fruit in demand at \$6 to \$7 a box for choice to fancy. Jamaica oranges \$6 a barrel, boxes 175, 200 and 216 counts, \$3.50 to \$3.75, 126 and 150 counts \$3.25 to \$3.50. Grape fruit scarce at \$3.50 for fair, up to \$5 for choice. California seedlings \$1.50 to \$2.37 a box, Navel, 176, 200, 216 counts fancy, \$3.25 to \$3.50, choice \$2.87 to \$3.25, 150 counts \$3 to \$3.25, 112 and 126 counts \$2.50 to \$2.75. California lemons scarce, many frosted in transportation and from \$2.50 to \$3.50 a box. Messina and Palermo 300 and 300 counts new \$3 to \$3.50 for choice, \$3.50 to \$4 for fancy. Old 420 and 500 counts \$1.75 to \$2. Malaga grapes \$3 to \$8 per case, as to condition. Figs steady at 8 to 15 cents a pound. Dates 3 to 3½ cents. Bananas in moderate request at \$1.50 to \$2.50 a bunch as to size and condition.

The Low-Down Commercial Fertilizer.

The commercial fertilizer is again in evidence. The barn door and the roadside fence beam with the advertisements which announce a multitude of brands as absolutely superior to all competitors. The calendar upon the wall, the memorandum book in the pocket, the piles of bags at the depot, the all-pervading odor in the air, all tell the story that spring is coming and that fertilizers are for sale.

Most farmers buy them in a bag, mixed, ready made. Such are the easy fertilizers. They are quite generally bought without regard to their character or their fitness. The name and—above everything else—the price are the controlling factors in the purchase. Close buying is all right, but it seldom happens in any trade that the cheapest is the best, though it almost always happens in the fertilizer trade that the best is the cheapest. Yet the trade has for years in some sections been largely in low-grade goods—the cheap low-down brands. Every manufacturer selling in Vermont makes brands of high, of middle and of low grade. Every man who would prefer to sell all of the best and none of the poorest class, not because he makes more on them, for the margin of profit is much the same in either case, but for the sake of his own good reputation. The popular demand for quantity rather than quality is the excuse for the low-grade dealer. The farmer himself, rather than the dealer, is responsible for them.

To make the cheap goods, either inferior raw material must be used, or else the good crude stock must be diluted with what is technically known as "filler." The latter is, it is to be hoped, and, indeed, is thought to be, the more common expedient. The economy of paying manufacturers, railroad magnates, general and local agents good money for mixing, bagging, freight and selling from four hundred to eight hundred pounds of everyday dirt in every ton of fertilizer does not appear. It is far better for the farmer who wishes to use a low grade of fertilizer to buy less of a higher class goods and to make his own low grade by mixing in more or less mud of soil at home.

The Vermont Experiment Station has for years been preaching this doctrine. It has incalculable several notions concerning the fertilizer trade, none of which has had any more certain foundation than the one here advanced. Let low grades alone—note the character of the goods and their fitness for special needs—and buy as much plant food for a dollar as can be got. Nine times in ten the farmer who buys the cheap goods gets the most weight but the least plant food for his money.

LICE ON YOUNG ANIMALS.
Years ago we heard a farmer ask another what he should use to kill the lice on his calves. "Well," said the old man, "a little grease will drive them off." "How shall I use it?" was the next query. "If you can put it under the skin it will be the best way," was the answer, and as the calves were very lean the reply was as good as could have been made. It is a fact that fat calves or other young animals are seldom lousy, and if they get so the vermin do not seem to be very long lived. We have not seen one on a calf, but poultry for many years, and hope the time may come when they will be banished from the poultry yard. But remember that good food, good care and cleanliness are the things that these pests will not thrive upon.

FARM WELLS.
The location of the well on the farm is of the greatest importance. In many instances the farmer starts his well near the buildings and yards, and selects the lowest point as a location, with the idea that he will not have to dig as deep as he would upon higher land. This is a mistake, as we know of several places where the wells near the top of the hill are 25 feet deep and are not as much affected by drought as those on the lower land at the foot of the hill, though there may be fifty or a hundred feet difference in the elevation. But the chief of the well on the low ground is that it is close to the surface drainage from the higher land, and thus the water soon becomes so contaminated as to be unfit for use, either by the family or the animals, for to be healthy they must have pure water. These days of driven wells, a pipe can be sunk on the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the wind power is better, and by taking the water from the highest gravel knoll or so close to the surface that the water is pure and sweet, and when water is reached it is pure and sweet, too, because the surface water is away from it, and not toward it. If a windmill pump, the

Poultry.

A Dollar a Year for Each Hen.

If one could depend upon making a net profit of a dollar a year from each hen, it would be a profitable business to conduct the poultry business on a large scale. It is possible to make this amount in some instances, and we hear of undoubted cases where this is made from a colony of one hundred more. But to make such a profit it is necessary that intensive culture should be observed and rigidly lived up to. It is more than half the average man makes only a profit of half this amount, or say from sixty to seventy-five cents per year.

Yon know of a colony of hens that has in the year averaged a net profit of \$1.25 per hen. They were a selected lot, however, and hardly represented what all the hens of a farm could do. There is a reason why such a colony should be selected by itself. Select from the farm the best layers and put them together in a separate colony. Then keep an account of all the eggs they lay. If for any reason some of the hens should fail to keep up their standard, take them out of this colony, and add those from a general yard which show qualifications to the select company. This selective process is an excellent training in showing you just what hens of the flock are the best layers, and it also demonstrates pretty forcibly that it can be accomplished if one weeds out those that do not pay. Now if the whole flock could be brought up to this high standard, would not the chance of making a dollar a year and more per hen be greatly advanced? In order to keep even one colony up to this high state of efficiency it will be necessary to cull out from their number and add new blood every year, for some will run out of their powers of laying, and will no longer be fit for the company they are in. It will be necessary to raise more new blood continually to keep up the special colony. If one is successful in thus establishing an ideal colony of layers, a second colony should then be started. This one might be just a little lower in productiveness than the first, and it can be used as a feeder for the first. By carrying this policy right through the whole farm the chickens will all be graded in a short time according to their productiveness, and one knows at once how to handle them. There is more chance of profit in this way than by letting the colonies go about in a mixed condition, with good, bad and indifferent layers together.

Pennsylvania. ANNIE C. WEBSTER.

Poultry and Game.

There are few changes in the poultry market this week. Choice chickens are scarce, and best large fresh killed are 15 to 16 cents, with fair to good 10 to 13 cents; extra choice fowl are 12 to 13 cents and common to good 10 to 11 cents. Ducks are steady at 12 to 14 cents and geese 10 to 12 cents. Pigeons \$1 to \$1.25 a dozen and squabs \$2 to \$2.50. Western dry packed chickens in demand and some selected choice soft are 12 1/2 to 13 cents, average choice 10 1/2 to 11 1/2 cents and common 9 to 10 cents. Fowl choice in boxes 10 1/2 to 11 1/2 cents and barrels 10 to 10 1/2 cents, light weights 9 cents. Capons sell slowly, choice 7 pounds or over 12 1/2 to 13 cents, medium 11 to 12 cents, small and slips 10 cents, and old roosters 7 to 7 1/2 cents. Turkeys plenty, but mostly large and coarse. Choice small hens at 12 cents drawn and 11 1/2 cents undrawn. Mixed weights 10 1/2 to 11 cents, large hens 9 1/2 to 10 cents, young toms 9 to 9 1/2 cents, old toms and No. 2 to 8 cents. Ducks 10 to 12 cents and geese 10 to 9 cents.

Live poultry in light receipts, good fowl bring 10 to 10 1/2 cents; chickens 9 to 9 1/2 cents and old roosters 6 cents. Game in light supply. Choice dark grouse are \$1.20 to \$1.25 a pair, and light \$1 to \$1.15. Choice quail \$2 to \$2.25 and poor to fair \$1.25 to \$1.75 a dozen. Wild ducks in moderate demand, canvas backs \$1.50 to \$2.25 a pair, red heads \$1.25 to \$1.50, and mallards 75 to 90 cents. Tuesday and Wednesday of next week are the Hebrew Purim holidays, and there will be large demand for live poultry Saturday to Tuesday night.

Horticultural.

Orchard and Garden.

The Narnia Cannellans tell of an apple tree in Narnia, near the St. Clair river that was put out by the original settler on the homestead about seventy-five years ago. It is now nine feet eight inches in circumference at the ground, and holds that size to the branches, and its spread from tip to tip of limbs is over one hundred feet. It bears enormous crops of fruit in the good years and small crops in the bad. Those who advocate close planting and the Western orchardists who say that the bearing season of a fruit tree does not often exceed twenty years should look with veneration to this old patriarch of the orchard.

The following extract from a census bulletin issued by the Department of the Interior may be of interest to some of our readers.

From the tabulations in this bulletin it appears that there are in the United States 430 nurseries, valued at \$41,978,835.80, and occupying 172,866 acres of land, with an invested capital of \$52,425,689.51, and giving employment to 45,657 men, 2279 women and 14,200 animals, used in the propagation and cultivation of trees and plants \$900,606.04 worth of implements. Of the acreage in nurseries, 95,025.42 were found to be used in growing trees, plants, shrubs and vines of all ages; and the figures, based upon the best estimate of the nurserymen, show the total of plants and trees 3,286,853,778, of which 518,016,612 are fruit trees, 685,003,396 grapevines and small fruits, and the balance nut, deciduous and green trees, hardy shrubs and roses. The largest acreage is devoted to the production of apple trees, viz., 20,232,075 acres, amounting 240,570,666 young trees, giving an average of 11,890 per acre, while the plum, peach and cherry trees, producing 88,494,367, 72,242 and 49,887,894 young trees, or an average of 11,307, 11,299 and 14,961 trees to the acre.

A meeting of the Nebraska State Horticultural Society some of the members seemed to be disappointed because their orchard did not come into bearing. One man who had thirty-five acres in 1892 was having the trees cut down as they did not yield good returns. Here we should think they were disappointed if they gave a good yield in two years, and if set on a rich soil so as to have a vigorous growth of branches we should expect a good crop under fifteen years, unless we had taken much pains in cutting back to force fruit buds to start. One of the oldest orchards in Nebraska, set in 1855, now in bearing, but the Northern States did not give any fruit until eighteen years ago. While this variety is a vigorous grower it is late in coming to bearing.

Mr. John was made of two orchards of eight thousand Keiffer pear trees each that had proved a disappointment. There was

no other variety planted with them, and this variety is very poor as a self pollinizer. One speaker had an apple orchard which was planted with four rows of Ben Davis and six rows of Winthrop. The rows of each nearest the other were more productive than those farther from the other. Another case of defective pollinization. The sense of the meeting seemed to be that if the weather was sunny the pollen might go to some distance, but in misty, damp or rainy weather it would be only where two varieties were contiguous.

At the meeting of the Connecticut Pomological Society M. B. Waite of Washington, D. C., said that the surest and earliest symptom of yellows on the peach tree was the premature fruit, and the tree should be destroyed before it began to make the budding sprouts. The peach does not spread like the yellows, and is rarely found in a commercial orchard, but usually in trees by the roadside. Brown rot had been very destructive in Georgia and Michigan last year, and it had been necessary in some places to shake peaches from the trees to keep this disease from spreading.

Mr. Bernhard of Meriden, said that there were thousands of gallons of grape wine made in Connecticut every year. The scarcity of rain last year during the growing and maturing season had lessened the quantity without improving the quality of the product. The best way to produce pure and wholesome wines was to have perfectly ripe grapes of high quality, stem and crush them in closed vats, with good, well-regulated fermentation, and observe perfect cleanliness in every operation. The fermentation should not be for over forty-eight hours on the husk for port and five or six days for claret. Then a reasonable amount of sugar should be added, using the best granulated sugar dissolved in hot water and poured into the fermenting vats. White wines are made of white grapes, crushed, pressed and fermented in the barrels. All new wines need racking off in December, taking only the clear wines and putting into clean barrels. This should be done again in March, June and October the first year, after which twice a year is often enough.

Dr. W. C. Sturgis of the experiment station at New Haven gave the results of his experience with spraying mixtures. He advised spraying peach orchards before the buds expand with the Bordeaux mixture, made with five pounds of lime, five sulphate of copper to fifty gallons of water. After the petals fall, spray with one pound potassium sulphide in fifty gallons of water, or Bordeaux mixture, two pounds sulphate of copper, five pounds of lime in fifty gallons water. Do not be frightened if the leaves are slightly injured, as a thrifty tree may lose ten per cent. of its leaves without suffering any bad effects, and with possible benefit to the fruit in better coloring and freedom from fungus disease.

Mr. W. H. Skillman of Rocky Hill, N. J., said he could not grow European or native plums profitably because of black rot. He could not check it with Bordeaux mixture. He could do well with the Japan plums and found the Wickson the best of them. Mr. Skillman advocated small trees, and in buying peach trees never wanted them over 2 1/2 feet high. For plums he wanted plenty of cultivation, beginning early in the spring and keeping it up until August or later. Preferred stable manure as a fertilizer and used it freely. He thinned fruit plums trees by shaking the trees, which improved both quality and size. He found the berry crate the best method of marketing the fruit.

Hon. J. H. Hale was in favor of any law looking toward destruction of insect pests, but with the experience of the peach growers he thought it would be useless to ask the Legislature for anything of the kind at present.

A resolution was passed favoring some legislative action for protection against the San Jose scale.

In the afternoon Professor A. G. Gully of the Storrs Agricultural College advocated thinning fruit. The standard Baldwin apple should be 2 1/2 inches in diameter, and of that size 400 would fill a barrel. He did not agree with those who claimed that as good apples and as many could be got on soil and on cultivated soil.

Mr. E. Bliss of Wilbraham has been successful in growing peaches on rocky pasture land, by cultivating with an implement that would stir the soil regardless of stones, although the larger stones had been removed. The fruit thus grown was as fine as any seen in Springfield markets.

The Hay Trade.

At most of the Eastern markets the receipts of hay have been very moderate for the past week, and the higher grades have prices well maintained, but rejected and inferior lots are but little called for. This is a general rule with all products, and while the National Hay Association is trying to regulate this by a more careful adjustment



The Pace That Tells.

In the six day bicycle race the pace tells terribly at the end. Man after man falls out exhausted. The victor wobbles wearily over the line. In the business race it's the same. Man after man drops out exhausted. The successful man is often a dyspeptic, unable to enjoy success. When the stomach is diseased there is not enough nutrition assimilated to sustain the body and repair the daily waste of tissues. The result is weakness, tending to collapse.

Dr. Pierce's Golden Medical Discovery cures diseases of the stomach and other organs of digestion and nutrition. It enables the perfect assimilation of food by which the body is built up with sound, healthy flesh.

Dr. Pierce's Peppermint Cure cures sick headache.



FRENCH MARIGOLD.

of prices to grades, and by giving shippers information which will prevent some good hay from going into the low grades by a mixture of the poorer with it, there is yet much to be done in this way. In the larger markets and with larger buyers this attempt to carry poor grades along with the higher at same prices delays sales and really means lower prices to the shippers and vexation to every one.

The hay supply in Boston fell off very much last week, being but 183 cars, of which 36 were for export, but out-of-town dealers are well stocked up, perhaps having been influenced to buy liberally from fear that incendiary fires at the hay sheds might cause a scarcity in the market. For some week last year there were 223 cars, and only 12 for export. Prices are for choice timothy, large bales \$18.50 to \$19, small bales \$18 to \$18.50. No. 1, both sizes \$17.50 to \$18, No. 2 \$16 to \$17, No. 3 clover and clover mixed, \$15 to \$16. There were 9 cars of straw, with long rye at \$16 to \$17, tangled rye \$11 to \$12 and oat \$9 to \$9.50.

New York hay market holds steady prices on higher grades, and good lots of clover are in demand. Receipts were 530 tons, against 487 tons previous week and 529 tons same week last year, but exports were 10,586 bales, against 5810 last week. Straw more plenty, being 550 tons, against 370 tons previous week, but there is a good demand.

The Hay Trade Journal gives highest prices on Feb. 22, at New York and Jersey City \$19.50, Boston \$19, Philadelphia \$17.50, Baltimore, Richmond and New Orleans \$17, Buffalo and Nashville \$15.50, Pittsburgh \$15.25, Cleveland \$14.75, Cincinnati \$14.50, Louisville \$14, Duluth, St. Louis and Chicago \$13, Minneapolis \$11.50, Kansas City \$11, Prairie Bay, Duluth and Chicago \$12, Pittsburg \$11, New Orleans and Minneapolis \$9.50, Kansas City \$9.

Bean pods have been shipped to Boston from Orono, Mich., baled the same as hay, to be sold as feed for hogs and cattle. The farmer there gets \$4.75 to \$5 per ton, but as we have heard of no sales here yet, we cannot quote Boston price.

The Montreal Trade Bulletin says there is a good demand there for baled hay for United States and Great Britain, and sales of No. 1 have been made in New York at \$17.50 in carload lots, with fancy at higher prices. Baled hay sells there at \$8.50 to \$11 as to quality. Buyers from the States are not making many new contracts, owing to difficulty of getting cars to move lots already bought.

Maple Sugar and Syrup.

As the city grocers are beginning to bring out the "new maple sugar and maple syrup" that they had left last spring, we may expect that about a month later the sugar orchards of Vermont will begin to produce sugar again. There is a fair prospect for a moderate crop this year, though it may be several years before it is as large as it was before the forest caterpillar made such destruction of the foliage of the orchards. Two years ago next summer we think was the time when they were most abundant, and we then said that it was probably their last year of doing much damage, as it was their third year there, and we never had known them to continue in large numbers more than three years. We wish the gypsy moth worms were subject to similar limitations.

But many were discouraged by the looks of the trees that year, and some good orchards were destroyed, while others badly infested were so set back that they did not yield much last year, and may not reach the production this year that they did a few years ago. We expect to see good prices prevail for really good sugar and syrup. Indeed, a fancy article is likely to bring fancy prices not only this year, but every year, while only extreme scarcity will justify any one in expecting high prices for that of a poor quality.

There has been much of what might be properly called second quality or poorer put upon the market for a few years past. There were always enough sugar makers who could not produce the best from lack of the best means of evaporating the sap, or did not because they would not take the necessary pains, but in addition to this there has been considerable amounts of sugar sent from points so far south that, while the sugar maple grows, we think the sap is not of the same quality as that which comes from the trees near the base of the Green Mountains and the granite hills of New Hampshire.

There may have been good maple sugar made in Pennsylvania, Ohio, southern New York and southern Michigan, and as fine-flavored syrup as was ever sent from Vermont, but if we have ever seen it it was sold as being the genuine Vermont product, and cost a little more than that which bore a Pennsylvania or an Ohio label.

But this alone is not the cause of slow sales and low prices for the lower grades of goods. There have been millions of gallons of "maple syrup" and tons of "maple sugar" sold that never were anything but an imitation article, much more inferior to the genuine product than the oleomargarine is inferior to good butter, and other lots in which the poorest grade of the natural prod-

uct was used to give flavor to a compound of which the maple sap formed but a small part. It is this which has made many would-be buyers so suspicious of imitations or adulterated products that when they cannot afford to buy the highest priced they will not have any, or having bought and tried the cheaper grade they want no more.

Some of the leading Vermont sugar makers are trying to overcome this condition by insisting upon all sugar and syrup bearing the label issued by the State Association, and others favor appointing one firm in each large city to handle the guaranteed goods. The former seems the better plan, as the label could easily be copyrighted, making it a crime to use a counterfeit of it. If other States can produce as good an article as this made in New England let them use their own label and sell their goods according to their merit. What the public want is to be protected from the sugar and syrup made in the warehouse lofts of New York and Chicago by workmen who would not know a maple tree if they saw it.

There seems to be a general opinion among the expert makers that there is now more profit in making syrup than in making sugar. Cans holding from a quart to a gallon are in demand, when there is reasonable surety that the contents are genuine and unadulterated. It costs more to put it in the smaller cans, but it reaches a larger class of customers, who do not care to or cannot buy largely, and are willing to pay extra for a package that comes within the limit of their means each week.

Grocers often do not like to buy in casks, because of the trouble of drawing it out and measuring it. A good syrup is as slow as cold molasses in cold weather, and, again, as the heavier or richer syrup settles to the bottom and is drawn first, the last of the cask is not as good as the first, particularly when it takes long to empty it.

Some syrup makers can their product at a temperature of 100 degrees, or even warmer, but as it shrinks in cooling, either more must be added when it is cold or the cans must be partly filled, which causes dissatisfaction among the buyers. Others always fill with cold syrup, and claim not only full cans but a better flavored syrup and heavier syrup. We think that the farmer can afford time to fill his cans when the syrup is cold.

The sugar sells well in pails of ten pounds to a certain class of customers, but the pound lump reaches more, and the small cakes that sell for a penny each are always popular with children and suit the retailers. Probably the quicker sales or higher prices repay the extra labor of making the cakes. Pound cakes wrapped in parchment paper or even manila paper seem to be more attractive than the unwrapped cakes, and we think if the name of the maker or the association's guarantee of purity, or both, were printed on the wrapper it would prove a good advertisement and well repay the cost of printing.

Western New York Notes.

There is but little snow except in drifts. It has snowed almost every day for over two weeks, but it has been cold and windy, the snow light, and it has blown off the fields into depressions, along fences and into the roads, making traveling very inconvenient. If the snow were on a level, probably there would not be more than six inches. The roads fill up about as fast as broken out, reminding one of New Hampshire winters long ago. Indeed, for the last three weeks it may be said to have been furious winter weather, but all of the fore part of the winter was fine, giving an excellent opportunity for all kinds of work, and as it is getting well along towards spring, we can reasonably expect a change in the weather for the better soon.

Farmers in this vicinity, like those elsewhere, are anxious for rural free delivery of mail, and one route has been in operation out from Corning two months, while three more petitions have been sent to Washington and two more are being circulated. We look upon rural free delivery as a very desirable feature of the postal service, and one that should be extended as rapidly as possible.

Farmers have to bear a heavy proportion of taxation, and they should have this convenience by all means; and I have no doubt but that the time is near when every rural resident will have his mail delivered. We boast a great deal about America's wealth and of her great superiority over foreign countries, but until every family's mail is brought to or near the house, England, for instance, is very much ahead of us, for I am told that there one's mail is brought to him, even if he lives 'way back at the end of a road. Let those who say it cannot be made practicable think of this.

Farmers' institutes are now being held in different parts of the State, which cannot fail to be of great value to the agriculturists of the community in which they meet. Every person interested in agriculture should make it a point to attend the institutes that are conveniently reached from his farm; and do not be afraid to drop a question in the question box, or to take part in the discussion if you can add anything to the general fund of information. Many

things of value can be learned at the institute, that may be put to good use on one's own farm. Corning's Farmers' Institute will occur on March 11 and 12. Last year we had a very interesting meeting, and we expect this year's one will be an improvement over that.

The advice given recently in your valuable journal, for farmers to be looking up their new implements for the coming season, while there is plenty of time, is very good indeed. The variety of plows and harrows, as well as that of other agricultural implements, is now so great that it is sometimes a puzzling question to the farmer to determine which one will give the best satisfaction. In that case it will be best to give each a trial on his own farm before purchasing. The Cutaway line of implements, made by the Cutaway Harrow Company, Hingham, Ct., which have been coming to the front within the last few years, deserve a trial in every locality. I procured a Cutaway harrow in its earliest days, and have always liked it very much, but the improvements in it since then have made it a much better implement than is mine. Last fall I used the Cutaway disk plow some, and it is a wonderfully desirable implement where the soil is reasonably free from stones. Indeed, I think it is a great stride in advance. The progress made in farm implements of late years makes farming much more pleasant and profitable than formerly.

The "Agricultural Items" department of your paper is a very valuable feature. In fact, the paper itself is one of the most interesting and valuable to the farmer of any I read, and that is something over twenty.

F. H. Dow.

West Caton, N. Y., Feb. 22.

Boston Fish Markets.

With better weather fresh fish is more plenty and prices are lower on shore fish. Market cod are 4 1/2 to 5 cents and large the same, with steak at 3 1/2 to 4 cents. Haddock 2 1/2 to 3 cents, large hake 4 1/2 cents, and small 3 cents, cusk the same, and pollock 3 1/2 to 4 cents. Bass are steady at 15 cents for striped, 10 cents for sea and 8 cents for black. Bluefish lower at 9 cents, and half-broiler higher at 12 cents for white and 8 cents for gray. Spanish mackerel 15 cents, sheepsheads 12 cents, red snappers 4 cents and pompano 8 cents. Lake trout 12 cents and sea trout 5 cents, white fish 5 cents, white perch 6 cents and sea perch 15 cents. Herring now as plenty and bringing \$2.50 to \$3.25 per hundred. Pickerel are 12 cents a pound, native smelts 8 cents, Eastern 5 1/2 cents. Sole steady at 10 cents, cod's tongues at 9 cents and cheeks at 8 cents. Eastern salmon 17 to 18 cents and Western 8 cents. Oysters are steady at 75 cents for ordinary Norfolk, \$1.50 a gallon for selected and Providence River, 50 cents for Stamfords. Clams are 50 cents a gallon, or \$2.50 a barrel in the shell. Scallops and shrimps \$1 a gallon. Lobsters 18 cents a pound alive and 21 cents boiled.

The shipments of leather from Boston for the past week amounted in value to \$32,202, previous week \$19,419, similar week last year \$262,419. The total value of exports of leather from this port since Jan. 1 is \$1,295,002, against \$1,670,302 in 1900.

The total shipments of boots and shoes from Boston this week have been 84,075 cases, against 87,437 cases last week and 99,296 cases in the corresponding week last year. The total shipments thus far in 1901 have been 677,504 cases, against 758,331 cases in 1900.

The shipments of live stock and dressed beef last week included 2128 cattle, 3901 sheep, 6029 quarters of beef from Boston, 2149 cattle, 2165 sheep, 33,377 quarters of beef from New York, 1000 cattle, 2278 sheep, 1185 quarters of beef from Baltimore, 540 cattle, 200 quarters of beef from Philadelphia, 936 cattle, 1139 sheep from Portland; and 285 cattle from Newport News; a total of 7387 cattle, 9485 sheep, 31,115 quarters of beef from all ports. Of this, 1446 cattle, 638 sheep, 4105 quarters of beef went to London; 4783 cattle, 7241 sheep, 25,309 quarters of beef to Liverpool; 499 cattle, 633 sheep, to Glasgow; 400 cattle, 901 sheep to Bristol; 300 cattle to Hull; 1700 quarters to Southampton, and 29 cattle, 50 sheep to Bermuda and West Indies.

The North Pole is the mathematical point at the northern termination of the earth's axis. Whether land or water be there the phenomena of the sun during the polar day or of the stars during the night would indicate its position.

The falling off in exports from New York and the gain from other ports is given in a New York paper as follows: New York 88.79 per cent. of the wheat and 6.67 per cent. of corn, Boston 1.53 of wheat and .71 of corn, Philadelphia 6.66 of wheat and 8.55 of corn, Baltimore 3.63 of wheat and 23.70 of corn; in 1900, New York 44.75 per cent. of wheat and 30.10 per cent. of corn, Boston 27.62 of wheat and 9.73 of corn, Philadelphia 13.01 of wheat and 23.05 of corn, Baltimore 11.10 of wheat and 21.62 of corn, Norfolk and Newport News 4.11 of wheat and 9.06 of corn; of flour in 1901 20.41 per cent. in New York, and in 1900 25.30 per cent. The increase in flour 8.16 to 11.56, Philadelphia from 6.08 to 15.65, Baltimore from 15.31 to 21.82 and Norfolk and Newport News from 0.41 to 15.90 per cent. New York has decreased about one-half in percentage of exports of these products, and all other places have made large increase.

Exports of Boston packed pork were large last week, amounting to \$262,000, against \$257,000 for week previous and \$145,000 for corresponding week last year.

The British government has purchased for the troops in South Africa 113,975 horses in Great Britain and 71,874 elsewhere, of which 21,000 were from the United States and 5700 from Canada.

The decrease in the hay crop of Germany last year was 651,500 tons and in the clover crop 1,496,000 tons.

"Bill," an old horse which Mrs. Charles C. Goodman of Reading, Pa., drove for eighteen years prior to her death, will not get \$3000 which his mistress requested to him in her will; but he will never miss the legacy. Judge Bland has relieved Mrs. Goodman's husband, who is executor of the estate, from performing the remarkable bequest, but upon a promise that Bill shall be well taken care of during the rest of his life. Mrs. Goodman was always a great lover of horses, and Bill was her favorite. He received much of his gentle owner's attention, and grew to expect such delicacies as fruits, celery, salads, sugar and candy on his daily bill of fare. Bill is an intelligent bay horse, aged twenty-two years. Even in

his old age he is seldom passed on the road. Eggs have fluctuated during the week, but are now lower again. Nearby and Cape fancy are easy at 22 to 23 cents. Northern and Eastern choice fresh at 19 cents with fair to good at 17 to 18 cents. There are selected and fancy fresh Western at 18 to 19 cents and fair to good at 17 to 17 1/2 cents, while good to choice Southern fresh are 17 to 18 cents. There was a fair demand for refrigerator eggs at 13 to 15 cents, and 1620 cases were taken out, leaving only 1948 cases. A year ago there were 8193 cases.

Exports of dairy products from New York last week included 9684 packages of butter to Liverpool, 1024 to London via Southampton, 69 packages to Hamburg, 202 packages to Bremen, 250 packages to Copenhagen, and 9200 boxes of cheese to Liverpool, 2055 to Leith and Dundee, and 25 boxes to Havre, a total of 11,228 packages of butter and 11,280 boxes of cheese.

The receipts of imported wool in New York from Jan. 1 to Feb. 23 were 5624 bales less than those in same part of 1900 and of domestic wool 3032 bales more.

Muttons and lambs are rather easy, with veals dull and easy. Lambs 7 to 9 cents, Brighton and fancy 9 to 10 cents, muttons 6 to 7 1/2 cents, fancy and Brightons 7 to 8 cents, veals 7 to 9 cents, fancy and Brightons 9 to 10 cents.

Trafford makes the exports from the Atlantic coast last week to include 306,400 barrels of flour, 1,400,000 bushels of wheat, 3,406,000 bushels of corn, 1790 barrels of pork, 11,901 pounds of lard and 3718 boxes of meat.

Beef sells rather slowly, and the market is barely sustained. Fancy sides 8 1/2 cents, choice 7 1/2 to 8 cents, good 6 to 7 1/2 cents, light and grass 6 1/2 to 6 3/4 cents, cows 6 to 6 1/2 cents, fancy hinds 10 1/2 cents, extra 10 to 10 1/2 cents, good 9 to 9 1/2 cents, fancy fore 6 1/2, heavy 5 1/2 to 5 3/4 cents, good 5 1/2 cents, light 5 cents, backs 6 and 7 1/2 cents, rattles 4 1/2 and 4 1/4 cents, chucks 4 to 4 1/2 cents, short ribs 10 to 10 1/2 cents, rounds, 6 1/2 and 8 1/2 cents, rumps 8 to 12 cents, and loins 8 1/2 to 12 1/2 cents, loins 10 1/2 to 13 cents.

The world's shipment of grain last week included 6,628,302 bushels of wheat from six countries, and 3,467,668 bushels of corn from four countries. Of this the United States furnished 3,424,302 bushels of wheat and 3,367,668 bushels of corn.

The visible supply of grain in the United States and Canada on Feb. 23 included 57,336,000 bushels of wheat, 18,218,000 bushels of corn, 10,567,000 bushels of oats, 1,156,000 bushels of rye, 1,659,000 bushels of barley. Compared with the week previous this shows an increase of 1,147,000 bushels of corn and 265,000 bushels of oats, with a decrease of 146,000 bushels of wheat, 18,000 bushels of rye and 19,000 bushels of barley. The supply Feb. 24, 1901, was 53,444,000 bushels of wheat, 16,322,000 bushels of corn, 5,755,000 bushels of oats, 1,152,000 bushels of rye and 1,341,000 bushels of barley.

No changes are noticed in pork products. Heavy backs \$17, medium \$16, long cut \$17.50, lean ends \$19, bean pork \$13.50, fresh ribs 10 cents, corned and fresh shoulders 9 to 9 1/2 cents, smoked shoulders 8 1/2 cents, lard 8 1/2 cents, in pails 9 1/2 to 9 3/4 cents, hams 10 1/2 to 11 1/2 cents, skinned hams 11 1/2 cents, sausages 9 1/2 cents, Frankfurt sausages 9 1/2 cents, boiled hams 10 to 10 1/2 cents, boiled shoulders 12 cents, bacon 13 1/2 to 14 cents, hologna 8 cents, pressed ham 11 cents, raw leaf lard 9 cents, rendered leaf lard 9 cents, in pails 9 1/2 to 10 cents, pork tongues \$22, loose salt pork 9 cents, brisquets 9 1/2 cents, sausage meat 7 1/2 cents, city-dressed hogs 7 1/2 cents, country 4 cents.

The largest wheat field in the world is said to be that owned by an Italian immigrant named Guazone, in Argentina. His last crop was from 67,200 acres, or something over one hundred square miles. The Elk Valley Farm in the United States had ten thousand acres in wheat, and Canada has one of four thousand acres in the northwest.

The total exports of domestic products, including breadstuffs, cattle, hogs, provisions and cotton for the seven months ending Feb. 1, 1901, were \$495,000,000, against only \$257,000,000 for the corresponding months of 1898—a remarkable growth.

GRAVES' MANGE CURE

For Dogs, Cats, Horses, Cattle and Sheep. All Skin Diseases they are subject to can be cured by this valuable remedy. Also

GRAVES' MEDICATED SOAP

For Fleas and Lice for Dogs, Cats and Horses. Sure to kill them quick.

No. 11 PORTLAND STREET, Boston, Mass.

THE BUSINESS HEN

Breeding and Feeding Poultry for Profit.

A condensed practical encyclopedia of profitable poultry-keeping. By 93 practical poultrymen. P. H. Jacobs, Henry Hale, James Rankin, J. H. Drevett, and others. Fully illustrated. 5000 Questions about poultry for profit. Carefully edited by H. W. Collingwood. A collection of the most valuable articles on poultry ever written. Starting with the question "What is an Egg?" it indicates the conditions and the best method for developing the egg into a clear and simple manner. Two successful answers to egg-questions are a flock of 800 hens that average over 200 eggs each per year, in short, this is the best book for all who love the "little American hen" that has ever been printed.

Price in paper cover 40 cents.

For Sale by Massachusetts Ploughman.</

Our Homes.

The Season of Rest.

With the coming of Lent such opportunities for leisure and rest present themselves to the busy woman that the season is hailed with special delight, whatever may be one's religious convictions. To the devout the period is one of spiritual upliftment and refreshment, a time of especial significance and opportunity. Others regard the season likewise as one of opportunity, but rather for intellectual than spiritual achievement, an opportunity to read the books one has so long desired, and to put into written language the thought by which one has long been persistently haunted.

The intensely practical woman hails Lent as a time of replenishing. The linen closet is overhauled, and many worn articles replaced, and the family wardrobe likewise receives attention. Dainty garments, to be in readiness for the summer days, grow under the hands of skilful needlewomen. Each in her way avails herself of the opportunity presented when social demands relax their hold.

Were there nothing else to recommend the Lenten season to women, the opportunity for simple rest would be enough. Fortunately there are higher motives which appeal to many, thus lifting the period into the realm of consecration, and giving it a sacred character. But the utilitarian side has potent attractions also.

The average American woman does not rest enough, and, indeed, the characteristic American, without regard to sex, lacks repose of manner, which is largely attributable to the incessant stress of business and of society in this favored land of ours. It is a brave woman, indeed, who has sufficient courage to ignore social demands and take the rest which is her due; and to this fact may be attributed the apparent increase of nervous diseases and instances of mental collapse. Nature is above all else just, and her laws cannot be violated with impunity.

Excesses of whatever sort sooner or later bring retribution. Even the best things may be overdone. The over-zealous church worker or philanthropist suffers alike with her sister who succumbs to the strain of a continuous round of frivolous pleasures. Club membership, an excellent thing of its kind, may, to the woman of many clubs, degenerate into dissipation. Yet nature ever sounds a warning note, which, heeded, might avert much suffering, if not complete wreck.

Many of the Lenten hours would not be misapplied if passed in sleep. There is no better restorer, and more persons do not sleep enough than there are who waste precious time in sleep. Nor does any fixed rule as to the hours of sleep required apply to any number of individuals. Common sense dictates that one should sleep until rested, not until some other thinks she should awaken. Each is a law unto herself, and can best judge her own requirements.

In this hurrying, bustling age, when duties press on every hand; when one has to be constantly alert to keep abreast of the times, so rapidly is history being made, and so thick and fast come announcements of scientific discoveries in literary and artistic progress, there is little danger of encouraging sloth by an admonition to rest. The men and women of today are intensely alert, active to a degree unknown a generation or two since, and he or she who is otherwise is a subject for the physician rather than the monitor.

"Power through repose" is what, as a rule, we most need, and a reasonable portion of time devoted to rest will be productive of the highest results. To that end, as well as because of its spiritual significance, we hail the coming of Lent, stopping, as it does largely, the social machinery, and giving opportunity for a higher development through the medium of rest.

The Workbox.

A KNIPPED AFGHAN.

Procure 14 pounds of Fleisher's scarlet germandown zephyr and 1 pound of olive green. Work with 1 pair of large rubber needles.

For one stripe cast on 45 stitches.

1st row—Plain knitting.

2d row—Purl.

3d row—(*Yarn over needle, 3 plain, pass 1st stitch over the other 2; repeat from (*).

4th row—Purl.

Repeat from beginning until strip is 1½ yards long, or any other length desired.

Make four red stripes and three olive green. Crochet stripes together using a strand of red and one of green. I think it desirable to baste stripes together before joining by crochet. A crocheted scallop all round afghan is pretty, and if liked, fringe may be tied in at top and bottom.

A FLUTED SCARF.

We have had the plain scarf but this is a little different. Four and one-half hanks of pink, Fleisher's shawl flax, 3 hanks of white. Bone needle, size 0. With white cast on 100 stitches and knit across plain, second needle purl, third plain, fourth purl.

Now take the pink. First and second needles (*), 3 plain, over twice, narrow, repeat from (*), fifth needle purl (same number of stitches as on third needle), sixth needle plain.

Now white and repeat from first (*). Use white 47 times and pink 45 times, finishing with heavy fringe of both colors.

EVA M. NILES.

A Cough, What Kind?

Nothing is so common in dispensary and private general practice as for a patient to ask for a bottle of medicine for so-and-so's cough, very frequently for a child the doctor has never seen. Now it will be our purpose to show that it is impossible to correctly prescribe and treat a cough without first examining the patient.

A cough may be due to any of the following causes:

1. Enlarged tonsils.
2. Inflamed throat.
3. Enlarged uvula tickling the back of throat by flapping.
4. Dropsy of the entrance to the windpipe.
5. Bronchitis and inflammation of the lungs.
6. Asthma.
7. Stomach disorders.
8. All febrile disorders.
9. Consumption.
10. Pleurisy.
11. Growth about the air passages.

And various other rarer causes too numerous to mention.

It is, therefore, obvious that a cough cannot be treated without knowing the cause, and we shall endeavor to make plain the different varieties of cough, and how they may be recognized, taking them *seriatim*.

Enlarged tonsils can be seen by telling the person to open the mouth and take a deep breath, or, if necessary, by pressing down the tongue with the handle of a tablespoon, and may further be known by a peculiar throaty voice.

Inflamed Throat. On examination in a good light, by the method indicated in last paragraph, the throat will be found reddened and swollen.

Elongated Uvula. By examination in the same manner, and observing whether it touches the back of the tongue or tonsils.

Dropsy of the Glottis—By the sudden symptoms of choking and great difficulty in breathing, and almost always occurring in women, especially at the climacteric.

Bronchitis—By the violent paroxysms of coughing, accompanied after a time by expectoration of thick, yellowish, viscid mucus.

Pneumonia—By the high state of fever and the short hacking cough, accompanied by the expectoration of rusty-colored mucus.

Asthma—By its "twangy" cough, which is periodical and severe, great difficulty in breathing, the arms generally being placed on some object to raise the shoulders in order to get a better leverage for the pectoral muscles.

Stomach disorders usually give rise to a cough which is not severe, but which obviously starts in the diaphragm or muscles that divides the chest from abdomen.

Febrile complaints give rise to a short cough not characteristic.

Consumption is accompanied by a hollow cough, and expectoration of mucus that looks like pledgets of wool soaked in water, and frequently there is coughed up mucus mixed with bright streaks of blood and air bubbles.

Pleurisy gives occasion to a restrained cough, kept down because of the great pain it causes in the region of the inflammation.

Watch a patient as he enters the room, and several things may be noticed which will aid the diagnosis. If the lips are parted, and there is a curious vacant look about the face, it is a throat cough, probably from enlarged tonsils. If the voice is husky most likely it is due to inflammation of the pharynx. If the cheeks are hollow, and the person is thin and has a flush over each cheek, look out for consumption. A big, burly man or woman with a large chest and bluish lips and suffused eyes generally denotes bronchitis—the bluish, livid appearance particularly. If the hand be held to the side as the person coughs pleurisy may be suspected, especially if there is an evident desire to repress it.

A person with dropsy of the glottis will not be able to walk to the surgery.

Children do not spit up the phlegm; to distinguish throat from chest ailments in them, watch the nostrils and the rapidity of breathing. If you find the former moving rapidly, dilating and shutting, and the breathing quick, it is a chest ailment.

Croupy coughs speak for themselves, and so does whooping cough when the whoop comes on. In the earlier stages whooping cough is a simple cough, but croup early develops a "crowing" cough.

In the cough of commencing fevers the other obvious signs are those of heat, thirst and constipation, and the heightened flush on the cheeks and glowing eyes. A simple cough—that is, a cough due to inflamed throat—is best treated simply by glycerine slightly swallowed or syrup of tolu, with a little pectoral, and in adults by sucking ice or a cold water bandage to the throat externally.

It is not sufficient in these days for any person to plead ignorance of the nature of disease, and put it down to a cough, and rest on the self-satisfied assurance that they themselves have had several coughs, but they have always got well, for has it not been clearly shown that a cough proceeds from a variety of causes, some of great gravity and menacing life itself.—Health.

Bread Making.

It is probable that bread making has more to do with the health and happiness of the household than any other branch or department of domestic cookery. It might not be going too far to say that the ability to make good bread contributes more to the comfort of the average family than a knowledge of all the other branches of the culinary art, for in civilized communities bread is, undoubtedly, the most universal article of food, and its quality must necessarily affect all sorts and conditions of men. In almost every family in this country, bread is the one article of food which forms a part of every meal, and it is, therefore, evident that the health and comfort of the community depend largely on its proper preparation, says Culinary Topics.

An authority on culinary matters says: "There are three kinds of bread, viz., sweet bread, bread, and sour bread. Some housewives make sweet bread, a great many make bread, but few make sweet bread. 'Sweetness' in bread is a positive quality that not many bread makers have yet discovered." This is a sweeping assertion, but, unfortunately, there is too much truth in it. The difference between "sweet bread," which is only another name for good bread, and "sour bread," or even "bread," is very marked, not only in taste and appearance, but also in nutrition and digestibility. The importance of good bread is not likely to be called seriously in question, and the importance of knowing how to make bread that is really good follows as a matter of course. The good bread maker, unlike the poet, must be made as well as born, and must be taught as well as have practical experience. This journal, while aiming to convey information with regard to the various branches of the culinary art, has no aspirations to run a kindergarten of cookery, and, therefore, will refrain from giving anything more than the following hints:

Good flour is absolutely essential to good bread making, and the flour should be carefully sifted to separate the particles. Good yeast is another essential. This should be made from new hops, for there is no certainty of getting lively yeast where stale hops are used. Thorough kneading is an important part of the operation. It is a safe rule to knead the dough a little more after it has been kneaded enough. Raising 'he dough requires care and attention, for it should not be permitted to rise too much. Dough is frequently allowed to rise until its sweetness is destroyed, even if it does not actually become sour. Bread may be spoiled after it is put in the oven by neglecting to secure and maintain the proper degree of temperature. Recollect that an oven may be too hot as well as too cold, and try to attain "the happy medium."

Fallacy of Bolls.

Upon the familiar torment of boils Harvey Sunderland has this to say in *Ainslee's Magazine*:

"It is an unshakable article of belief with most people that skin diseases are almost always catching; that they show that the sufferers themselves or their parents are no better than they should be; that they indicate that the 'blood is bad,' that you must be careful or you will 'drive it in,' and the patient will die, if nothing more, and that a boil is worth five dollars a doctor's bill saved. They are all wrong, absolutely wrong, on the very best medical authority.

Not more than two or three of the hundred or so skin diseases catalogued are catching, and the chances are that the eruption is as innocent and as innocuous as a cold. If there is such a thing as a 'bad blood' medicine has not found it out. Next to teaching the knave in regard to the condition of blood in disease, chemical and microscopical study has utterly failed to show that there is any difference between the blood in health and the blood in cutaneous disorders. Certain of them are symptomatic of nervous breakdown, and imperfect digestion causes others. Tomatoes, bananas, strawberries, shellfish and other articles of diet, harmless to most of us, cause a rash to break out on others. Evidently the medical profession does not fear 'driving the disease in,' for the treatment of skin diseases is now wholly local.

"A boil is an acute inflammation of the tissues surrounding the hair-follicle, and is due to some infection of the follicle by a germ, generally the staphylococcus pyogenes aureus. I thought you might like to know the name. Boils come upon the just and the unjust, on those who have good blood and those who have bad blood. What forms inside the tormenting thing is not the strained-out impurities of the blood, for pus does not exist in the blood. It is of local formation. A boil is not worth five cents, let alone five dollars. It is just what you untutored imagination says it is, a confounded nuisance. If anybody owed me five dollars and could either pay it in cash or bolts, whichever I preferred, I should take the cash every time, even at a discount. I think I should get more comfort that way."

The Care of Hair Brushes.

There is a right and wrong way to wash hair brushes, and the best brushes may be ruined by careless washing; if the bristles once become soft the brush becomes practically useless, says the American Queen.

The wrong ways to wash hair brushes are numerous, but aside from remarking that covering brushes with flour and rubbing the bristles together is a sure way to clean a brush, we will only suggest the correct means.

To keep the brushes in good condition have two shallow pans of water, one moderately hot, the other cold. To the first pan add to each pint of water it contains a teaspoonful of pure ammonia. Take your brushes, one by one, and keep dipping the bristles up and down in the water of the first pan, being careful not to wet the backs, and in a few minutes the dust and grease will come out of each, and fall to the bottom of the pan. Then dip each brush and down several times in the second pan, containing the clear water, to rinse them. Shake each brush well, and place all the brushes to drain across a rack. Use no soap, and do not rub the bristles with the hands. If this method of cleaning brushes is adopted they will last much longer and always appear as new.

Domestic Hints.

MOULDING HALIBUT AND PEAS.

Chop one pound of raw halibut very fine, add to this yolk of two eggs, one teaspoonful salt, dash paprika, soften one teaspoonful cornstarch with half cup milk, add one half cup milk to make two-thirds cupful, then stir into the fish, and lastly fold in one-third cupful double cream beaten stiff, butter individual moulds placing a circle of peas about bottoms, fill two-thirds full of good white stock. Let this boil water off, and in centre, unmoulded on hot plates, surround with creamed peas.

A Dainty Salad.

One-half pint of crab meat, two heads of celery, two hard-boiled eggs minced very fine, one tomato seeded and cut in slices, laid in a border of sliced lettuce with the crab meat, celery and hard-boiled eggs in the centre. Garnish with capers and season with French dressing.

FRENCH ROLLS.

One quart of sifted flour loosely measured, a little salt, two heaping teaspoonfuls baking powder; mix thoroughly together while dry; then add enough sweet milk, or milk and water, to make a stiff dough. Roll out thin and cut into circular pieces with teacup or cutter; then put a small lump of butter into the centre of each piece and fold the dough over it like turnovers. Bake immediately.

CREAM PUFFS.

One-half cup of butter melted in one cup of hot water; put in a small tin pan on the stove to boil; when boiling, stir in one cup of flour; take off, and let cool; when cold, stir in three eggs, one after the other, without beating. Drop on greased tins and bake in a hot oven twenty to thirty minutes.

PURÉE OF BARLEY WITH CHICKEN.

Soak two ounces of pearl barley in cold water for twelve hours. Then add to it two quarts of good stock. Boil till the barley bursts, adding more stock as it diminishes. When the barley thickens take it off and force through a strainer. Add to it then some dried shaped bits of cold cooked chicken that have been fried just a bit in butter.

CURRIED OYSTERS.

Fry two or three slices of Spanish onion in plenty of butter for five minutes or so without letting the butter brown. Then take out the onion, and stir in a little curry powder, or in the quantity you like. Add to this a half pint or so of good white stock. Boil until the onion is thickened with a little flour braded with butter. Season with salt and pepper to taste. Meanwhile have blanched in a little tomato sauce a pint of oysters, and over these pour the curry sauce. Pour over toast and serve.

Hints to Housekeepers.

In the healing of burns and scalds, where there is danger of contracting scars, rub the new skin several times a day with good sweet oil. Persist in this until the skin is soft and the scar is gone.

A pretty dish for a fish course is suggested by a Norwegian cook, who always bakes it in a mould which is fish shaped. Shred a couple of pounds of fresh halibut or codfish, freeing it from skin and bones. Marinate it until it is fine and smooth, and add to it one-half cup of melted butter, three well beaten eggs, three-fourths of a teaspoonful of salt and a dash of paprika. Stir in enough milk or cream to make a thick batter. Turn it into the greased mould, cover tightly and put it in boiling water and cook for two hours. After the fish is turned out, garnish it with slices of tomato and parsley and serve at once with anchovy or egg sauce.

For bean croquettes soak two cupfuls of small, white beans over night in tepid water. In the morning drain them, put them into cold water, that we have never noticed, then drain them and cover them with boiling water and cook slowly until tender. Press the beans through a colander, and season with one-half tablespoonful of no lasses, one-half tablespoonful of vinegar, one tablespoonful of butter and salt and paprika to taste. Let them cool, then form into balls, roll them in eggs and cracker crumbs and fry in deep, hot fat.

A simple and excellent filling for cake, especially one which has been baked several days, is called soft coconut. Four boiling milk of the latter part of the following week, add to it a very soft. Spread between and on top of a cake. This should be eaten inside of three days, especially in warm weather.

It is sometimes a good plan to bake the crust for a lemon or cream pie on Saturday if the housekeeper expects to be unusually busy the latter part of the week, as the crust will be in the hand to use whenever needed. A steamed pudding can be kept several days perfectly good, and is excellent in case of emergencies. It is always safer to keep soup stock on hand, and material for making a salad, so that an imprudent meal can be prepared in a short

time in case of an emergency. It places a housekeeper at great disadvantage if she is in the midst of a very busy day and with little or no provision on hand, and unexpected company appears. When one lives near supplies it is quite a different matter; but to be miles away from the baker, butcher and grocer one needs quite an assortment of canned goods on hand. With an abundance of fresh eggs, cream and butter, canned fruit, pickles and jellies, and plenty of good homemade bread, a very good meal can be prepared in a short time.

For a luncheon dish bake large, regular shaped potatoes. While they are hot cut them in two lengthwise, and remove the soft parts. Mash this season with butter, cream, salt and a trace of paprika. Reat it very light and replace in the shells. Sprinkle with grated cheese and return to the oven to brown. Serve very hot.

Fashion Notes.

Evening gloves with embroidered eyelets and facing at the top are one of the new fads, and it seems to be a useful one for keeping the gloves up at the top.

Everything in jewelry is now of "L'Art Nouveau" type. Flowers, birds, heads, animals, reptiles, fish appear in beads, necklaces, velvety "collar" ornaments and necklaces. An extremely Oriental novelty, called a gorgette, has come to the front in Paris, and is made of enameled gold and jewels. It is worn across the décolleté bodice, extending from arm to arm, and is deeper in the middle than elsewhere. In design it strikingly resembles the ornaments seen in pictures of Cleopatra and Roman women of her time.

Swiss muslins in great variety are displayed in the shops, some with very realistic designs in large flowers, others embroidered with white, black or some color as the garment, and without limit as to patterns. Chiffes in Persian designs and colorings with satin stripes are brought out again in tempting array, and then there is a new muslin, rather wry in texture, which shows varying tints in shaded stripes.

Among the novelties in veiling are gold-dotted and gold-bordered veils, red and royal blue. These are, of course, only for ultra tastes and occasions, and black, browns and white continue the ordinary wear. The green veil has disappeared absolutely.

The few new things in hats show big flats, the crown low and round, and the rather wide brim edged in with soft folds of silk, plain or in some fancy design, and frequently covered with chiffon. Pretty heavy rough straws are to be seen in many of these hats. Some French models show the hats of some kind of heavy corded silk.

Notes and Queries.

MILES THE BLOOD TRAVELS.—"Curious Girl." The mileage of the blood circulation reveals some astonishing facts in our personal history. Thus it has been calculated that, assuming the heart to beat sixty-nine times a minute at ordinary heart pressure, the blood goes at the rate of 267 yards in the minute, or seven miles per hour, 168 miles per day, and 3,220 miles per year. If a man eighty-four years of age could have one single blood corpuscle floating in his blood all his life, he would have traveled in that same time 5,130,880 miles.

ST. PETER'S AND COLLEGE CATHEDRALE.—"R. W. C." The dimensions of St. Peter's at Rome, the largest cathedral in the world, are as follows: Length of the interior, 614 English feet; of transept, 444 feet; height of nave, 162 feet; and the diameter of cupola, 135 feet. The height of the dome from the pavement to the top of the cross is 448 feet. Cologne cathedral is 511 feet long and 231 feet high. The towers are 511 feet high. This famous building, founded by Archbishop Conrad, designed by Architect Gervase, was begun in 1248, and was not completed until Aug. 14, 1880. It was solemnly opened, with august ceremonies, Oct. 15 of the same year.

GOING TO JERICHO.—"Student." The phrase "going to Jericho" bears the same meaning rather of consignment to perdition or penal exile than of deportation to a pleasure house, such as the Jericho of Henry VIII. was, albeit the phrase may have been suggested to that monarch's courtiers by the original allusion to Jericho in II. Samuel, x, 2: "And the King said, Tarry at Jericho until your beard be grown, and then return," whence it became a proverbial saying "to stay (or tarry) in Jericho (until one's beard is grown)," that is, to wait in retirement or obscurity until one grows wiser.

Who would, to curb such insolence I know, bid such young boys to stay in Jericho. Their beards were grown, their wits more hard. Heywood's Hierarchie, iv, 298. Halliwell does not cite an instance of the phrase, but says, "Jericho, a prison. Hence the phrase: to wish a person in Jericho."

Let them then go to Jericho, And tarry there till they are wiser. —Mercurius Aulicus, 1648.

Gems of Thought.

...Hell is full of good meanings and wishings. —Herbert.

...He makes no friend who never made a foe. —Tennyson.

...Hope dries the tear which sorrow weepeth. —T. Ingoltsby.

...He that falls into sin is a man, that grieves at it is a saint, that boasteth of it is a devil. —Thomas Fuller.

...Half the failures of life arise from pulling in one horse and he is leaping. —J. C. H. Hall.

...All great men have a curious under sense of powerlessness, feeling that the greatness is not in them, but through them, that they could not do or be anything else than God made them. And that something divine something God-made in every other man they meet.—Ruskin.

...Discipleship to Christ is not a long labor and a long pathway, at the end of which we secure a reward in payment for what we have done. It is a life which has its inheritance, as its birthright, at the outset, and makes forward in the conscious possession of it.—Timothy Dwight.

...All things else are uncertain, and we drift and wander in them—life, love, hopes, fortune, fame, friends, all we pursued, day by day we lose. One thing only is certain, that we are mortal, and the work we do by walking in his truth upon the world.—Stefford A. Brooke.

...Every man who lays up treasures for himself and trusteth in them is disappointed. God sees his life which is in them, and he knows that bodies which are more than raiment. He has given the greater, will he not sustain them if you are rich toward him? Therefore be not anxious.

...Those who are really happy are usually those who are really good. The bad, wicked and vile can never feel the happiness of joy that comes to gladden the heart of the well doer. To be good is to live temperately, industriously and honestly, and to be always learning something new and useful. All who do these things will find the true secret of happiness.—Emerson.

...One of the greatest needs of the world and the church today is men who know how to pray. The need is felt and acknowledged, but it is easily supplied; for prayer is a most wonderful thing and few of us know much about it. When we begin to study prayer, and find it in it something of the infiniteness of God and that in this matter the most advanced of us is but a beginner. There are mysteries in prayer that we have never explored; there is a power in prayer that we have never felt; there are joys in prayer and sorrows in prayer that we have never tasted. Though we may have been in Christ for years, we still need to come to him as disciples came of old with the request: "Lord, teach us to pray."

Rev. G. H. MacGregor.

...Love is always building up. It puts some line of beauty on every life it touches. It gives new hope to discouraged ones, new strength to those who are weak, new joys to those who are sorrowing, thus enabling them to go on in life's ways when without the cheer they must have sunk down in their discouragement. It makes life seem more worth while to every one into whose eyes it looks. Its words are benedictions. Its every breath is full of inspiration. It does good and never evil all its days. It is like God, whose name is love. It carries in its influence a perpetual revealing of God. It goes through the world like an angel of joy and peace, singing into human hearts the song of heaven, scattering everywhere good seeds which shall yield a harvest of righteousness.—Westminster Teacher.

One woman to every ten men worked for wages fifty years ago, but now the ratio is one to four.

Curious Facts.

—There are seventy-two million cubic miles of water in the Atlantic Ocean, 141,000,000 in the Pacific.

—Garnets are found in scores of places in the United States. The best come from Colorado, though fine gems have been found in New England, New York, Virginia and North Carolina.

—A tunnel twenty-five miles long, reaching a depth of 1800 feet below sea level, is planned between Vaquerias Bay, Spain, and Tangier, in Africa. It would be the deepest in the world.

The first export of cotton from this country was in 1785, in which year one bag was sent from Charleston to Liverpool, while twelve were sent from Philadelphia and one from New York.

The first firebrick made in this country were manufactured in Baltimore in 1827. They were manufactured for the backs of the old-fashioned fireplaces, the limestone proving too friable.

When Hannibal's army descended from the Alps into the valley of Lombardy, the whole force was well nigh routed by a plague of mosquitoes, which drove men and animals almost wild with pain.

The United States Treasury report estimates that present consumption of corn by hogs, at least eight million bushels, or thirty-eight per cent. of the present crop, and the average consumption by each hog at not far from twenty bushels, and total number slaughtered the past year over rather than forty millions.

Brilliant.

Lead on, O Lord—Love, Grace and Might—Lead on through toil and prayer; No worship shall make labor light, And hope ennoble care. —S. J. Stone.

another year is but another call of God To do some deed undone and duty we forgot; To seek some wider thought of man and good; To think and love with kinder eye and warmer heart.

Until acquainted more with him, and keener eyed To sense the need of man, we serve With larger sacrifice and readier hand our kind.

Who, by aspersions throw a stone At the head of others, hit his own. —George Herbert.

The inner side of every cloud Is bright and shining, I therefore turn my clouds about And always wear them inside out To show the lining.

Dear Lord, my soul desireth, In all thy work requirer, By works 't adorn thy grace: Oh, might my conversation Display on each occasion That holy mind which in thee was.

In my degree and measure To aid me be my pleasure, To edify, my care; Since that art ever ready, Friend of the poor and needy, All the disconsolate to cheer.

—Marianne Hymnal.

God's greatness flows around our incompleteness, Round our restlessness, His rest. —E. B. Browning.

Historical.

—Christmas night, 1776, Gen. George Washington crossed the Delaware, and the next day occurred the Battle of Trenton. The Hessians were, naturally, surprised. They took it for granted that the Revolutionary army would rest upon its arms and permit them to enjoy their Christmas in peace, but Washington concluded that the deed would be better by the day, and he loaded his small army into boats and crossed the icy waters of the muddy river. He reckoned correctly, and the result of his daring maneuver was that he attacked Colonel Hark at sunrise. The commanding officer and twenty of the enemy were killed and one thousand taken prisoners. Two Americans were killed and two were frozen to death. Washington's valor, however, saved the American cause. He had found it difficult to secure recruits, but this coup brought him thousands of volunteers.

—The accession of Edward VII., now sixty years old, to the throne of England, recalls to "Grandpa" Mainwarring a venerable citizen of Bethany, O., an incident of his departure from his native land for America. He set sail from Liverpool for New Orleans, but after having proceeded a short distance from port, the vessel encountered a storm and was compelled to return to Liverpool for repairs. It reached there in the night, and on nearing the shore the people on board could hear salutes being fired, bells ringing, and general rejoicing in progress. On landing, Mr. Mainwarring learned that the occasion for the celebration was the announcement that a prince and heir to the throne of England had just been born. It was he who has just become King Edward VII.

Popular Science.

—Liquid air has been used to propel an auto mobile and for refrigeration and blasting. Other applications have also been contemplated. Thus far, however, none of these have yet been developed to a stage that insures a commercial demand for the product, and the problem of storing it without evaporation is not yet fully solved.

—One of the chief governing instincts among wild birds is the sense of fear. This feeling of fear is not apparent in birds until ten or twelve days after birth. All perching birds acquire the instinct of fear at from eight to ten days after birth, and this instinct becomes the controlling factor in the subsequent experiences of the bird, being either lessened or increased by circumstances.

—When soda ash was obtained from seaweed a Parisian soap boiler discovered in it the element of lodine. In the hands of Nieper and Deleury this lodine was found to render a silver surface sensitive to light. The developed and fixed impression on the plate gave the daguerreotype. The French Government purchased the secret and made it free to the world.

—The biggest guns for naval service now have a calibre of only twelve and thirteen inches. They weigh from fifty to sixty-five tons, and are from forty to fifty feet in length. They throw projectiles weighing from 800 to 1200 pounds. For coast defence, however, heavier ordnance is possible. The great 12-inch gun being completed for the United States at Watervliet will weigh 128 tons, and it is expected to hurl a 270-pound projectile twenty miles. This piece is nearly fifty feet long and measures six feet across the breech.

—The greater part of the earth's crust, the water and the air, consists of but few elements.

ARMSTRONG & McKEEY
PITTSBURGH
REYNOLDS & McKEEY
PITTSBURGH
DAVIS & McKEEY
PITTSBURGH
FARMSTEADT
PITTSBURGH
ANGOR
REYNOLDS
PITTSBURGH
ATLANTIC
BRADLEY
PITTSBURGH
BROOKLYN
NEW YORK
UNION
PITTSBURGH
SOUTHERN
CHICAGO
COLLIER
PITTSBURGH
MISSOURI
PITTSBURGH
RIDGEMAN
ST. LOUIS
SOUTHERN
PITTSBURGH
JOHN T. LEWIS & BROS CO
PITTSBURGH
MORLEY
CLEVELAND
BAILEY
Cleveland, Mass.
CORNWELL
Buffalo
KENTUCKY
Louisville

THE cost by the pound or gallon is

not the true measure of

economy. Considering the cost of

material and labor necessary to paint a

house, Pure "old Dutch process" White

is the cheapest and, durability considered,

The Horse.

Still More About the Saddle Horse.

In reply to Rev. Mr. Hughes and Mr. Watson's criticisms of my illustrations of the English seat and the correct seat, I wish to call attention to a few points. Rev. Mr. Hughes says: "I have lived over twenty-five years in Great Britain, and in all my experience I never saw a man sitting his horse in the manner designated by Mr. Clark"; while Mr. Watson says: "It would be difficult to make a more perfect picture of the English seat as it is seen in New York than Mr. Clark produced."

I know nothing about the English seat from personal observation, as seen in England. My criticism of the so-called English seat is of the seat taught in our riding schools and seen in our parks. Rev. Mr. Hughes says: "Mr. Clark remarks that the English rider hangs on to the reins to keep his balance, implying one might imagine that the Englishman's bridle reins answer a purpose similar to that of the support straps in a street car, or a sort of a rope by which he pulls himself up from the saddle and lets himself down again." Well, he has guessed it about right this time.

I still maintain that a man sitting on a horse as shown by Rev. Mr. Hughes' illustration cannot ride easily or gracefully, for he cannot rise to the trot and keep his body erect without support from the lines. When he does rise his body must move forward as well as up and down.

To illustrate. Suppose a man sitting on a high chair, in the same position as shown in Rev. Mr. Hughes' English seat, legs at the same angle, feet the same distance from the center of gravity, it would be just as impossible for him to keep his body erect and stand up, as it would be for a horse to jump a high fence without first crouching down before making the spring. Again, suppose the rider on an English saddle, stands straight up in the stirrups while the horse is at rest, his body will be compelled to move forward from eleven to twelve inches, or directly over the point of the attachment of the stirrups.

Try the experiment and you will find that I am correct, so you can easily see what the tendency is when riding at the trot on that kind of a saddle. Try the same experiment on an American saddle, where the attachment of the stirrup is near the center, and you will find that the forward motion of the body is very slight. I quote from an article by a well-known writer, Yeh Amerikanski, an expert in the saddle, who has also ridden in England. "Right here is the place to discuss a very important matter, namely, proper length of stirrup leather and position of feet in the stirrup. This is where the English are just as wrong as wrong can be."

"Their rule is that the bottom of the stirrup shall be at the level of the ankle joint, the foot shoved well home in the stirrup, the heel lower than the toe. If the rider is an Englishman and wants to break his neck, this is a good way to go about it; no man who followed that rule ever was a good rider, none ever will be. Either for safety or gracefulness the rule is utterly and abominably wrong and un-American."

"The bottom of the stirrup should be at the level of the ball of the foot, the joint of the great toe. This is the American method. So rides Bailey and so ride all good horsemen, with the foot never, under any circumstances, in the stirrup beyond the ball of the foot. What are the advantages of this method? They are many and not far to seek. The American seated equestrian sits lower in the saddle than he who rides with short stirrups. His thighs extend down the side of the horse, and he grips him as with a vise with the whole length of his upper leg. The man who rides with knees up has his thigh more nearly horizontal, and never can have the firm hold of the saddle the other maintains."

"To see some people ride a L'Anglaise, knees up, feet home in the stirrups when the horse trots, one would think they were trying to see how high they could bounce above the saddle and get back safely. Rising to the step of the horse, properly done, is a graceful motion, and eases the horse. To do this properly the body should be held erect, hands down so low the arms are perfectly straight, and the only motion admissible that got by moving the foot at the ankle joint by depressing and again easing the depression of the toe. These things the English rider cannot do. Perfect riding is a feat of balancing. The man riding with short stirrups cannot sit straight; he must bend forward to maintain his equilibrium, and since his feet are thrust into his stirrups as far as possible he can have no play of the ankle joint. This style of a fellow affects to turn up his nose at a Kentucky saddle horse."

Rev. Mr. Hughes evidently confounds the single foot with the pace when he says the horse really throws his weight from right to left and left to right, alternately. The gentleman is certainly in error. The horse does nothing of the sort.

The single foot is just as near to the trot as it is to the pace. In fact, it is just half way between the two. In the pace, two lateral feet strike the ground at the same time, as one foot; in the trot, two diagonal feet strike the ground at the same time. Some horses change from one gait to the other, as it were, in one jump, while others make the change very gradually, and in changing from the pace to the trot, first one of the lateral feet strikes the ground an instant before the other, then comes an interval; then the other pair of laterals move forward, one striking the ground a trifle in advance of the other, so when you count the hoof beats, it will be one, two, interval, three, four, interval, and so on.

The length of the time between the laterals gradually increasing and the interval between the diagonals gradually shortening, until both diagonals strike at the same time, when the horse will be moving at a pure trot. Now when the horse is right in the middle of this change and the time between the hoof beats is of equal length, he will be moving at a perfect single-foot. It is much easier to teach a trotter to single-foot than a pacer.

I regard it (the single-foot) the most difficult gait for the horse to acquire, but the easiest of all gaits for the rider; easy for the inexperienced to maintain their equilibrium and graceful and comfortable for the expert. Having handled hundreds of single-footers, sometimes riding as many as thirty a day when buying, I can speak from a very wide experience.

Few people in the East realize how many saddle horses are used in Missouri, Kentucky, Tennessee, Virginia and other Southern and Western States. In one town in Missouri, last spring, I counted more than three hundred horses hitched about the Court House square. This was an ordinary Saturday occurrence. These people, born and bred to the saddle, never call the trot a saddle gait, unless in a few places, like Lexington, where horses are fitted for the New York and a few other Eastern city markets.



THE NOTED BROOD MARE SIRE SAYRE'S HARRY CLAY, WAGON RECORD 2.29.

As I said before, I like the trotting gait and the other gaits, too. The more accomplishments the horse has, the more companionable, and I will go farther than many, maintaining that ordinarily it does not hurt a saddle horse to use him in harness. If a horse is continually worked in harness, without being ridden for some time, he may not behave as well under the saddle when you first commence again to ride him. If he is running in the paddock or pasture for the same length of time, he will not at first perform as well as if he had been regularly ridden.

I would like to ask the reverend gentleman a few questions: First, how he knows that a single-footer throws his weight from right to left and left to right? How many single-footers has he ridden? And when he ridicules my illustration of the correct seat, saying: "If a man were to ride five miles after this correct fashion he would run a serious risk of having to perambulate during the remainder of his mortal days like a lame rooster," how does he know that? Has he ever tried it or ridden on any other than an English style of saddle? I did not draw the picture of the correct seat, and don't just like the way the horse is made and stands, but the position in the saddle is about right, and is the way I generally ride. I have probably ridden more miles in the saddle and a greater variety of horses than any man in New England, and can't remember a time when I was ever lame or sore from doing it.

In conclusion I will quote from an article by J. H. Wallace who lived in this country many years. I've always believed him to be an Englishman, however. How is this, Mr. Editor?

"It never occurred to us till the other day why we have a set of fools about our city parks who seem to prefer a diaphragm-shaking, bone-dislocating trotter for a saddle horse. It is simply because the English ride nothing but trotters, and our dukes and dukes think nothing can be quite right unless it is English. And why do the English ride nothing but trotters? Because they have nothing else. It is not, therefore, a matter of choice, but of necessity, that the English ride trotting horses. It is that or nothing."

If we were to construct their pleasure carriages to rest on the solid axle, and without the shadow of a spring about them, it would be but a month till the brainless apes on this side would be doing the same thing, and shaking their lives out in the enjoyment of the luxury.

There is just as much enjoyment, and no more, in riding a trotting horse as there is in riding in a pleasure carriage without springs.

From the hard and relentless jolt of the trotter has come the necessity for that idiotic bobbing up and down with each stroke of the horse. Imitations are always vulgar and especially so senseless as one as this. It is no wonder that English writers unmercifully score the toadying tendencies of ignorant and brainless American tourists.

GEORGE L. CLARK.

Notes from Keene.

In looking over some of the stock hereabouts I found a much better feeling among breeders than for years back, and there will be quite a good many foals this spring by such sires as Air Bow of the Underwood Farm at Swaney, Robert Red and Administer of the Colony Farm at West Keene, Gary and Prince Chimes of the North Branch Farm at Keene, Sulphide Wilkes and a Roy Wilkes two year old at the Batchelder Farm at Surry, and last but not least Dr. Russell's thoroughbreds.

The Underwood Farm has disposed of three likely ones this winter in Zuna, by Lent (2.26), by Electioneer, with thoroughbred dam for six generations, a mare Mr. J. Malcolm Forbes bought as a yearling from Palo Alto; Karl D., a three year old by Darlington Chief, dam by American Lad (2.17), and Otis D., a two year old by Dictator Almont (2.24), out of the same dam. They have a black yearling by Dictator Almont (2.24), out of the dam of Karl D., that

Mr. Fred Turner of the Hartford Courant is using Ben Jefferson (2.29) on the road this winter. He is one of the best gaited trotters in the city, and is always ready for a "brush."

Mr. D. Sullivan's Marston C. colt has developed into a splendid road horse. Mr. Sullivan will use him for driving and for matinee racing this summer.

Mr. Gray, manager of the Lawson stable, has added a number of "new ones" to the string at Charter Oak Park the past few weeks that he has picked up at the different sales. Mr. Gray is willing to enter Gory (2.14) against such horses as Crescens (2.04) and Charley Herr (2.07). The matter of record is many seconds, but Mr. Gray is willing to waive that consideration for the sake of showing the quality of his horse.

Connecticut horsemen have bought a great

many horses during the winter to campaign this season, and most of the tracks in this State will "hang up" more money than they have in the past, so as to get the "good ones" to enter when they hold their meetings.

There is talk of forming a circuit, including Windsor, Hartford and East Hartford half-mile tracks. It would make it complete if the Manchester track would come in, and with good purses "hung up" would bring a large entry, as the tracks are only a few miles apart, and horses could be taken over the road, saving all shipping expense.

Mr. I. B. Davis has the black pacer mare Nellie (2.24), that he will get in shape for driving club matinee races this summer.

Charles Jencks of East Hartford will enter the Putnam (C.V.) Association this season.

Yours truly,
Hartford, Ct., March 2, 1901.

Providence Notes

Since writing you last we have lost one of the most popular horsemen of this vicinity, and one whose death cast a general gloom over those who knew him, even but slightly. When I wrote you last week Commodore William B. Bannigan was ill, and by the time my letter was on its way to your office he died. Monday morning the end came, and the suddenness was a shock to all, for but few knew that he was ill, and a less number realized how seriously.

None knew the deceased but to admire him. Although a millionaire, he was democratic in his views, and if he once knew you he remembered you, and did not hold himself above others of less means. A friend to hundreds and always ready to help one in trouble, with a cheery word for all, he well deserved his title of a prince of good fellows. To him is due the success of quite a number of organizations, for he took an active interest in all matters pertaining to abilities.

I knew him long before he became the man of money, and of late years found him just the same as in the days of old. I remember his fondness for baseball. Some years ago he was a member of a suburban club in the town where he resided, and up to the time of his death, and among the members he was popular. Billed to get the boys together and form a yachting party, and a game of ball always was included in the programme.

Of late he was the backer of the Providence baseball club, having purchased a controlling interest of the stock, and the lovers of the game looked forward to this city having a crack team and some great games. The Rhode Island Yacht Club owes its present prosperity and standing to his efforts, as do several other organizations with which he was identified.

His death will, no doubt, affect quite a number of persons financially. Van Valkenburg, who has charge of the stock farm at Cranston, will be unfortunately placed, as I understand he had a five-year contract with Mr. Bannigan to be in charge of the farm which was just starting. Van Valkenburg, as I understand it, leased his property and disposed of the greater part of his household effects before he came here. He was just about getting used to his new surroundings when the commodore died.

I feel sorry for Van Valkenburg, for he had one of the best opportunities of his life, for the commodore was going extensively into breeding, and the latter had the utmost confidence in his trainer's ability. At the farm are nearly twenty head, including some of the best bred stock in the country.

Among those at the farm is Betty Hamlin, a bay mare by Mambrino King; Regal Chimes, bay mare; Chimes; State Regent, bay gelding; by Vice Regent; Baron Lawton, by Baron Wilkes; Lou V. bay mare (2.18), by Quartermaster; Baroness Eola, black filly, by Baron Wilkes, and Baroness Nora, a filly, foaled in 1899, by Baron Wilkes; dam, Annie McGregor, by Robert McGregor (2.17), sire of Crescens (2.04). It was the intention of the commodore to breed Regal Chimes to Baron Wilkes, believing that the cross of the Chimes and Wilkes would produce a likely colt. He was at the time of his death negotiating for quite a number of other horses, including some from the Blue Grass region.

The new stalls at Narragansett Park are now almost completed. Secretary Dexter said that he will build twenty-five new ones. Applications for stall room are coming in already, and in the spring I expect that there will be quite a colony of steeplechase quarters at the track. The Pleasant Valley Stock Farm, Fred Clark in charge, will move to the track as soon as conditions are right.

F. C. Snyles of the Marlboro Stock Farm, Pawtucket, the home of AIX (2.02), has made an application for thirty-five stalls. Mr. Snyles will send to the track his youngsters entered in futurities. Mr. Pierce will have charge.

In the spring Mr. Perkins, president of the Narragansett Association, will hold a sale of colts, coach and driving horses at the track. The horses are being listed and are the get of registered and standard stallions, including Debut and Kyral. One of Debut's colts, a pacer, owned by Frank Marvin, who signs of great speed and will be campaigned in the slow stakes.

W. V. Dexter stated that he would probably give a free-for-all pace with four to start. The association proposes to make a strong bid for the Borahma race, that is, if any owner takes up Mr. Lawson's challenge. Now Mr. Lawson has a great trotter in Borahma, and the winner of every race he has started in can step faster than 2.08. With Charley Herr (2.07), Crescens (2.04) and Borahma in there would be a race worth seeing, and would furnish the scribes with material for a good story.

I see that Mr. Benson, who owns Fred R., has not come to the scratch yet, or rather, nothing has come of the bet. Mr. Hagan stated to me that he did not care about racing, as he simply speeds for the pleasure of the sport, but I think that Happy Doctor (2.21) could make Fred R. keep some at that. Now if Mr. Benson wants to

race I have in mind one owner who has a (green) one who will post his money for a race to take place on Decoration Day. It's up to Mr. Benson. All of the local horses which will be campaigned this year are doing well. Lady Geraldine (2.11) is wintering nicely, as is the balance of Colonel Godd's string. Mr. Burke reports Winch (2.04) as frisky as a two-year-old. Minnie L. Wilkes (2.20) is being given road work. Prince Alrt is quartered over in East Providence, but as yet Mr. Hanley has not stated who will campaign the 2.02 pacer.

MARCH AND THE LION.

Something Better Than the Old Saw.

The saying about the lion and the lamb in March often proves false, but there is another and a better one which is literally true. When March comes in and finds you taking Hood's Sarsaparilla to purify, enrich and vitalize your blood, you may expect, when it goes out, that it will leave you free from that tired feeling and with none of the boils, pimples and eruptions which manifest themselves because of impure blood in the spring. If you have not already begun taking Hood's Sarsaparilla for your spring medicine, we advise you to begin today. We assure you it will make you feel better all through the coming summer.

It is All Right Every Time.

MERIDEN, CT., Dec. 31, 1900.

I have used three bottles of your GOMBAULT'S CAUSTIC BALSAM and will you be kind enough to send me one more. Check enclosed. I have used it for all old, bad cases with good results. It will do more and better than all of the horse remedies I have ever tried in my 40 years' experience. It is the very best remedy on earth. The great trouble with most people is they want too much in too short a time. But with an intelligent man, a lover of the horse, there is no remedy that can accomplish so much, and do it as hands and smooth and clean and nice. It is all right every time.

E. NEWCOMB.

Treat your horse well and he will treat you well. Give him a bit of Gorn in Peat Moss. C. B. Barrett, 45 North Market Street, Boston, Mass.

many horses during the winter to campaign this season, and most of the tracks in this State will "hang up" more money than they have in the past, so as to get the "good ones" to enter when they hold their meetings.

There is talk of forming a circuit, including Windsor, Hartford and East Hartford half-mile tracks. It would make it complete if the Manchester track would come in, and with good purses "hung up" would bring a large entry, as the tracks are only a few miles apart, and horses could be taken over the road, saving all shipping expense.

Mr. I. B. Davis has the black pacer mare Nellie (2.24), that he will get in shape for driving club matinee races this summer.

Charles Jencks of East Hartford will enter the Putnam (C.V.) Association this season.

Yours truly,
Hartford, Ct., March 2, 1901.

Providence Notes

Since writing you last we have lost one of the most popular horsemen of this vicinity, and one whose death cast a general gloom over those who knew him, even but slightly. When I wrote you last week Commodore William B. Bannigan was ill, and by the time my letter was on its way to your office he died. Monday morning the end came, and the suddenness was a shock to all, for but few knew that he was ill, and a less number realized how seriously.

None knew the deceased but to admire him. Although a millionaire, he was democratic in his views, and if he once knew you he remembered you, and did not hold himself above others of less means. A friend to hundreds and always ready to help one in trouble, with a cheery word for all, he well deserved his title of a prince of good fellows. To him is due the success of quite a number of organizations, for he took an active interest in all matters pertaining to abilities.

I knew him long before he became the man of money, and of late years found him just the same as in the days of old. I remember his fondness for baseball. Some years ago he was a member of a suburban club in the town where he resided, and up to the time of his death, and among the members he was popular. Billed to get the boys together and form a yachting party, and a game of ball always was included in the programme.

Of late he was the backer of the Providence baseball club, having purchased a controlling interest of the stock, and the lovers of the game looked forward to this city having a crack team and some great games. The Rhode Island Yacht Club owes its present prosperity and standing to his efforts, as do several other organizations with which he was identified.

His death will, no doubt, affect quite a number of persons financially. Van Valkenburg, who has charge of the stock farm at Cranston, will be unfortunately placed, as I understand he had a five-year contract with Mr. Bannigan to be in charge of the farm which was just starting. Van Valkenburg, as I understand it, leased his property and disposed of the greater part of his household effects before he came here. He was just about getting used to his new surroundings when the commodore died.

I feel sorry for Van Valkenburg, for he had one of the best opportunities of his life, for the commodore was going extensively into breeding, and the latter had the utmost confidence in his trainer's ability. At the farm are nearly twenty head, including some of the best bred stock in the country.

Among those at the farm is Betty Hamlin, a bay mare by Mambrino King; Regal Chimes, bay mare; Chimes; State Regent, bay gelding; by Vice Regent; Baron Lawton, by Baron Wilkes; Lou V. bay mare (2.18), by Quartermaster; Baroness Eola, black filly, by Baron Wilkes, and Baroness Nora, a filly, foaled in 1899, by Baron Wilkes; dam, Annie McGregor, by Robert McGregor (2.17), sire of Crescens (2.04). It was the intention of the commodore to breed Regal Chimes to Baron Wilkes, believing that the cross of the Chimes and Wilkes would produce a likely colt. He was at the time of his death negotiating for quite a number of other horses, including some from the Blue Grass region.

The new stalls at Narragansett Park are now almost completed. Secretary Dexter said that he will build twenty-five new ones. Applications for stall room are coming in already, and in the spring I expect that there will be quite a colony of steeplechase quarters at the track. The Pleasant Valley Stock Farm, Fred Clark in charge, will move to the track as soon as conditions are right.

F. C. Snyles of the Marlboro Stock Farm, Pawtucket, the home of AIX (2.02), has made an application for thirty-five stalls. Mr. Snyles will send to the track his youngsters entered in futurities. Mr. Pierce will have charge.

In the spring Mr. Perkins, president of the Narragansett Association, will hold a sale of colts, coach and driving horses at the track. The horses are being listed and are the get of registered and standard stallions, including Debut and Kyral. One of Debut's colts, a pacer, owned by Frank Marvin, who signs of great speed and will be campaigned in the slow stakes.

W. V. Dexter stated that he would probably give a free-for-all pace with four to start. The association proposes to make a strong bid for the Borahma race, that is, if any owner takes up Mr. Lawson's challenge. Now Mr. Lawson has a great trotter in Borahma, and the winner of every race he has started in can step faster than 2.08. With Charley Herr (2.07), Crescens (2.04) and Borahma in there would be a race worth seeing, and would furnish the scribes with material for a good story.

I see that Mr. Benson, who owns Fred R., has not come to the scratch yet, or rather, nothing has come of the bet. Mr. Hagan stated to me that he did not care about racing, as he simply speeds for the pleasure of the sport, but I think that Happy Doctor (2.21) could make Fred R. keep some at that. Now if Mr. Benson wants to

World's Champions

Were developed and conditioned in the winter over the famous

Jewett Covered Track

Mrs. E. F. GERRARD, with the Village Farm Stable gave the Jewett covered track a trial last winter, and as a result, it won out and captured two world's records with

The Abbot, 2.03, and Lord Derby, 2.07

The former is the fastest trotter the world has known, and the latter took the winter record than any trotter ever took during his first season on the turf.

These Are Not Exceptions

As other trainers who have tested this great winter training ground will testify, during the last two years about half of the 210 performers have come from the Jewettville track, including The Abbot, 2.03; Lord B. 2.04; Almahurst, 2.06; Ace, 2.05; Lord Derby, 2.07, etc.

Winter Work is Profitable

When the Jewett covered track is used, campaigners may be jogged every day in the winter, and the trainer may find that he is earning something instead of losing on his earnings of the previous season. The stables are comfortable, the horses are fed on the best hay and corn, and the fires in the main stables. Natural gas is in use in all the buildings.

A Half-Mile Out Door Track

Constructed in the best possible manner and kept in perfect condition is an outdoor track for those who wish to get ready for early campaigns in the half mile track circuits. For horses, there is but one charge, \$5 per month for box stall and use of track. Board may be secured at the boarding house for \$4 per week. For further particulars, apply to

HENRY C. JEWETT, Jewettville, N.Y.



Campbell's Horse Foot Remedy

Cures Contracted Feet, Quarter Cracks, Nail Pricks, Corns, Sore Feet and other horse foot ailments.

CAMPBELL'S GALL CURE

Cures Scratches, Harness Galls, Barbed Wire Cuts, Sores and Abrasions of the Skin. It is not necessary to lay up the horse. Manufactured by JAMES B. CAMPBELL & CO., Chicago, Ill.

Worthley's "Slow Feed" 25 Pound OAT MANGER.

\$1.75 EACH. 10,000 SOLD. Patented Sept. 8, 1891. Broad Gauge Iron Stall Works, 53 Elm St., Boston.

....FORBES FARM....

The Champion Stallion Trotter of
...1898 and 1899...

BINGEN, 2.06

By May King, 2.20; dam, Young Miss, by Young Jim.

TERMS \$100.

Fee for stallion service due when mare is served. Mares kept at \$4.00 to May 1; after May 1 at \$2.50 per week. Address

....J. P. HALL, Ponkapog, Mass.

....VILLAGE FARM....

STALLIONS IN SERVICE, 1901.

CHIMES
5348

DARE DEVIL
Record 2.09

DIRECT HAL

Other Stallions in service at reasonable fees. Send for Catalogue.

C. J. & HARRY HAMLIN, Village Farm, East Aurora, N.Y.

SEASON OF 1901 **EDGEWOOD FARM** SEASON OF 1901

PEDLAR 12903

RECORD 2.18 1-2.

Sire of Anniella Pedlar, 2.18 1-2; Trader, 2.25 1-4; Princess of Cedars, trial 2.28 1-2; Cold Cash, p, 2.17 1-2; Oudray, p, 2.16 1-2; Elspeth, p, trial 2.12 1-2.

\$50 with usual return.

EDGEWOOD FARM, North Grafton, Worcester Co., Mass.

Horse Owners! Use GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure for the place of all liniments for mild or severe action. Removes Bunches or Blomishes from Horses and Cattle. SUPERBLY ALL CALLED. ON FIRING. Responsible to produce cure or refund. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular.

THE LAWRENCE-WILLIAMS CO., Cleveland, O.